

FIG.1

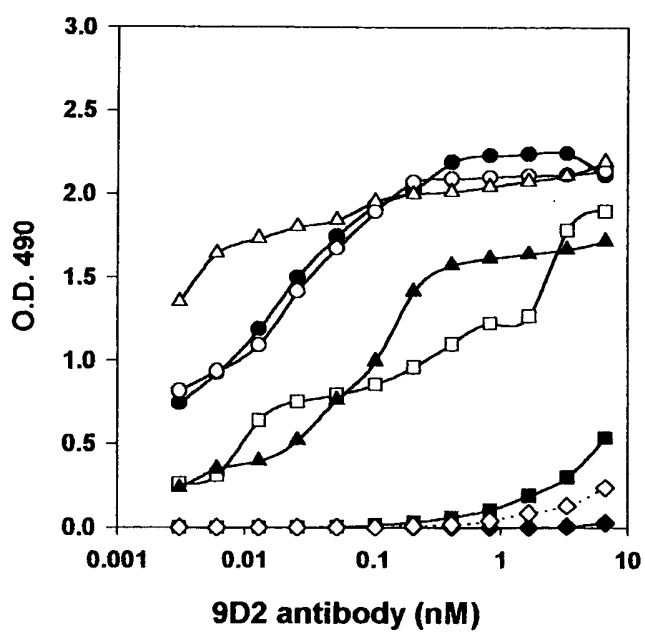


FIG. 2A

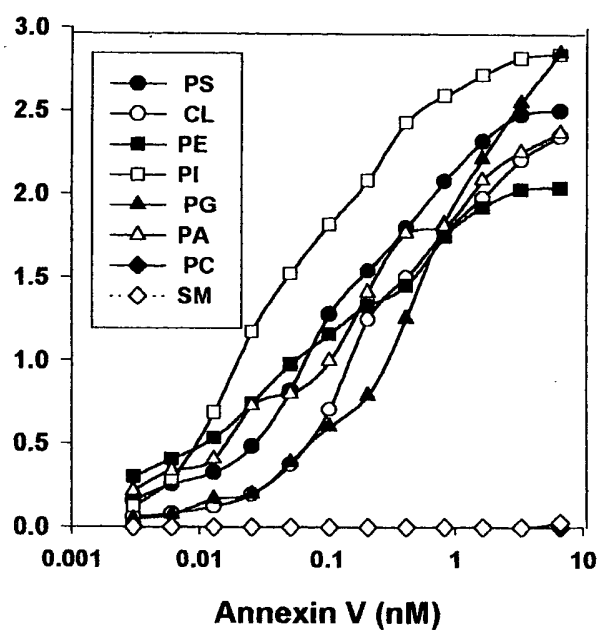
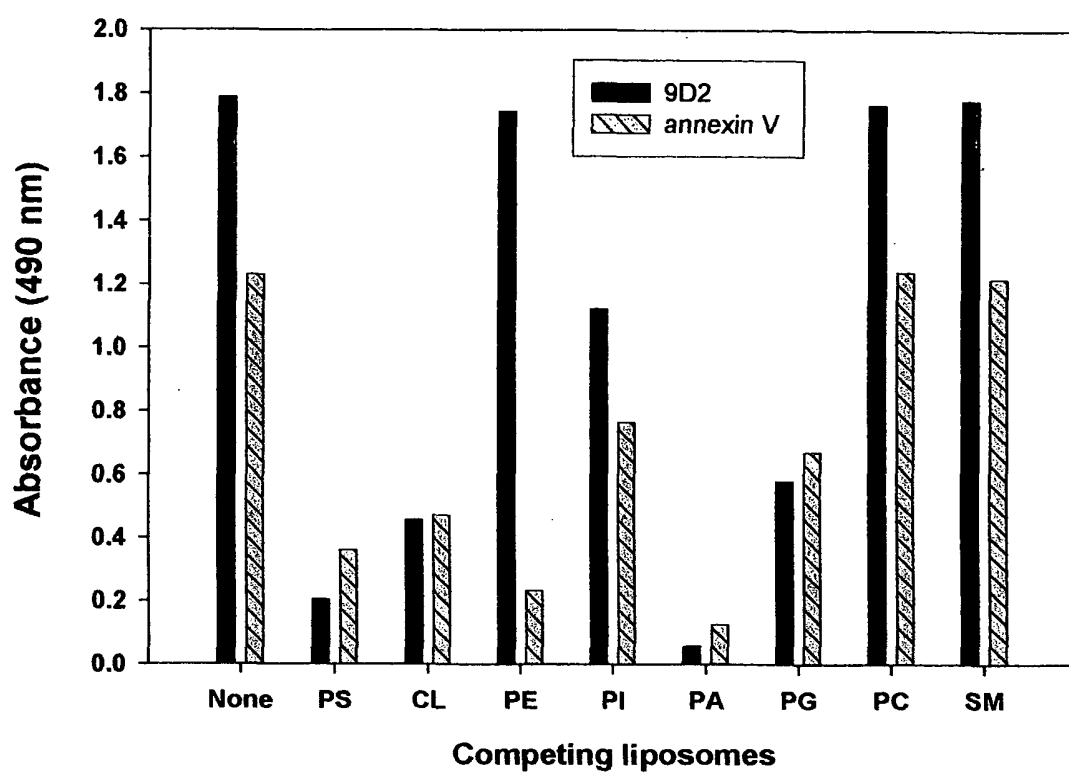
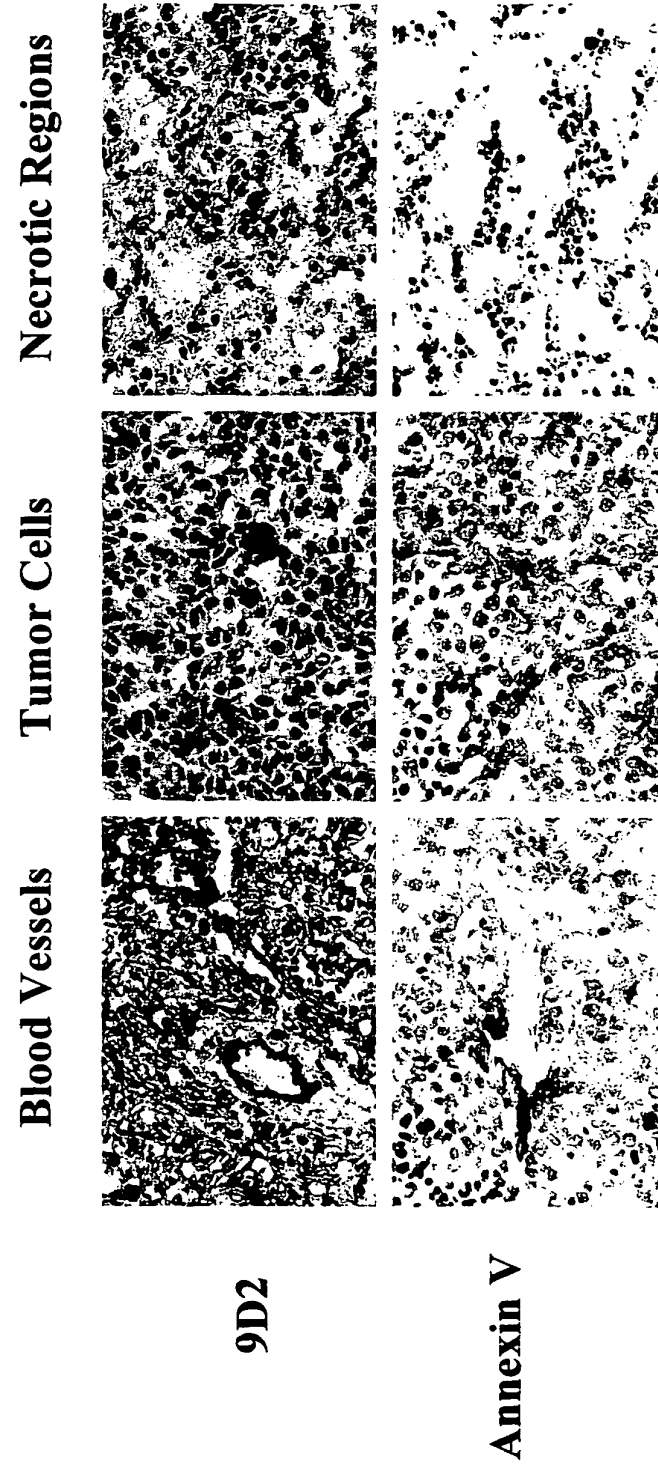


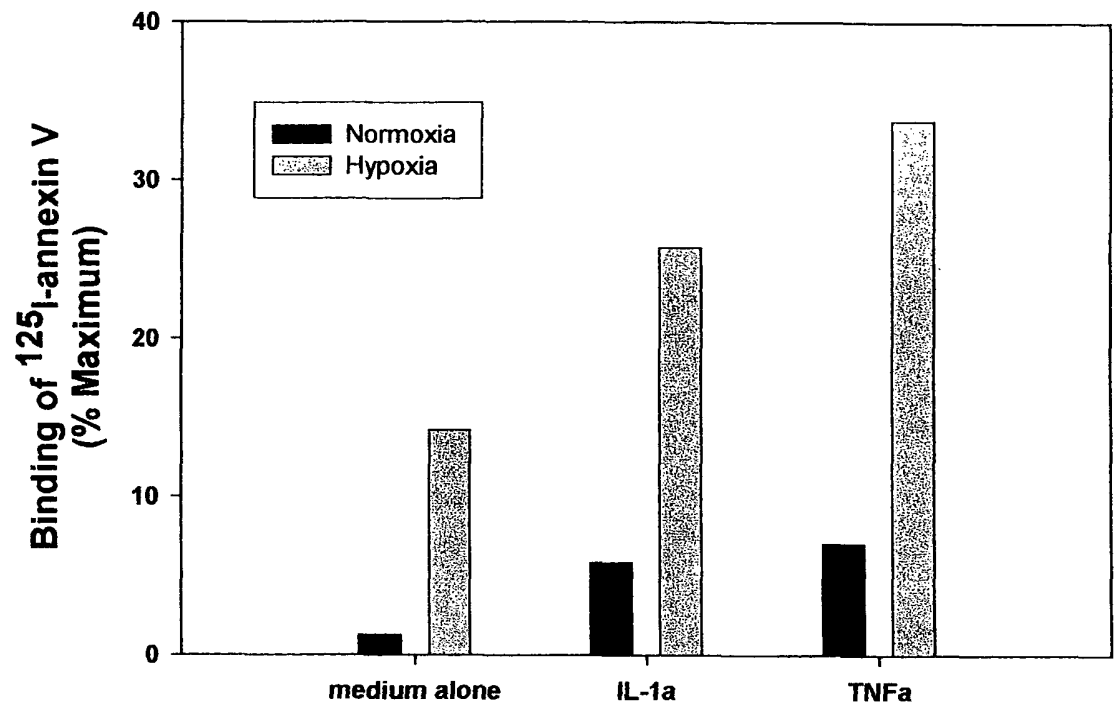
FIG. 2B



**FIG. 3**



**FIG. 4**



**FIG. 5**

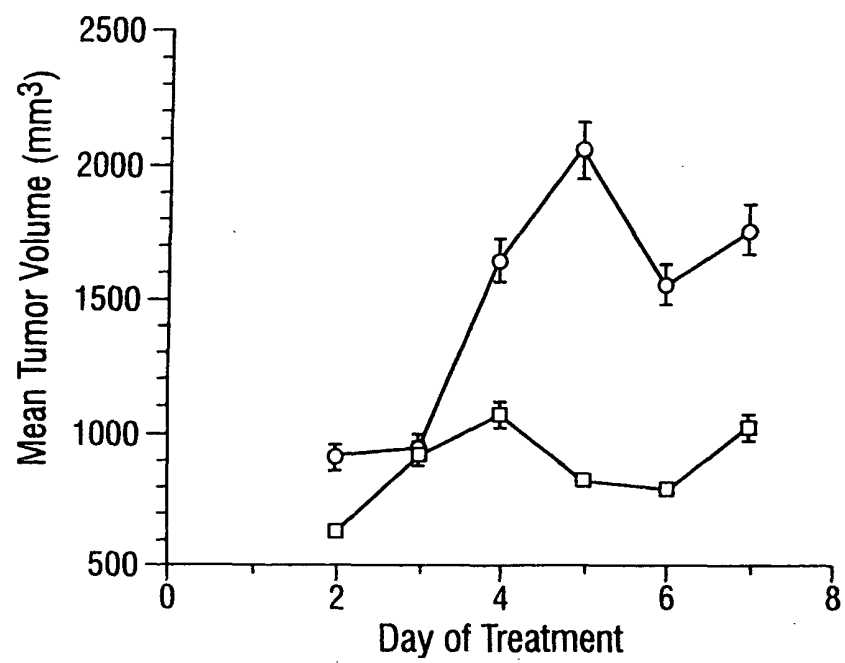


FIG. 6A

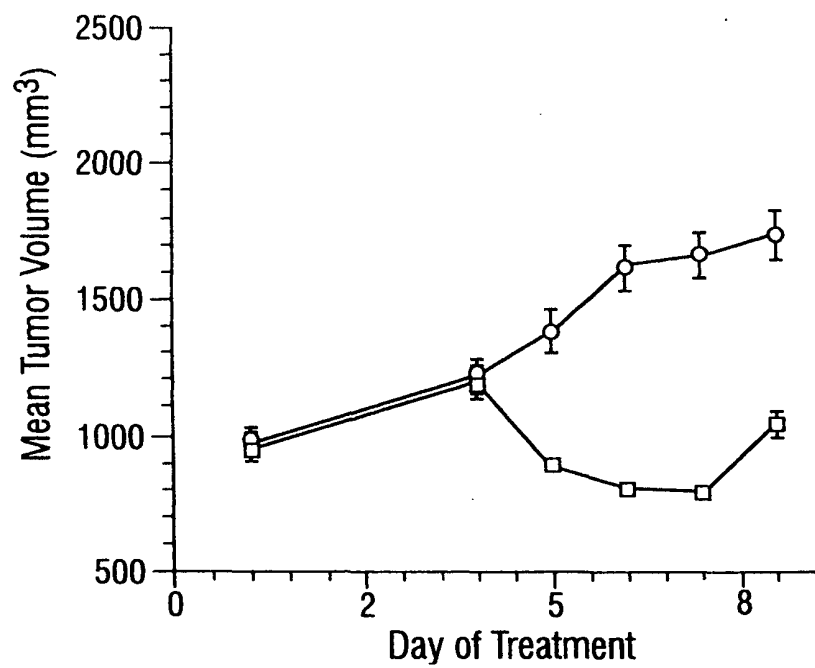


FIG. 6B

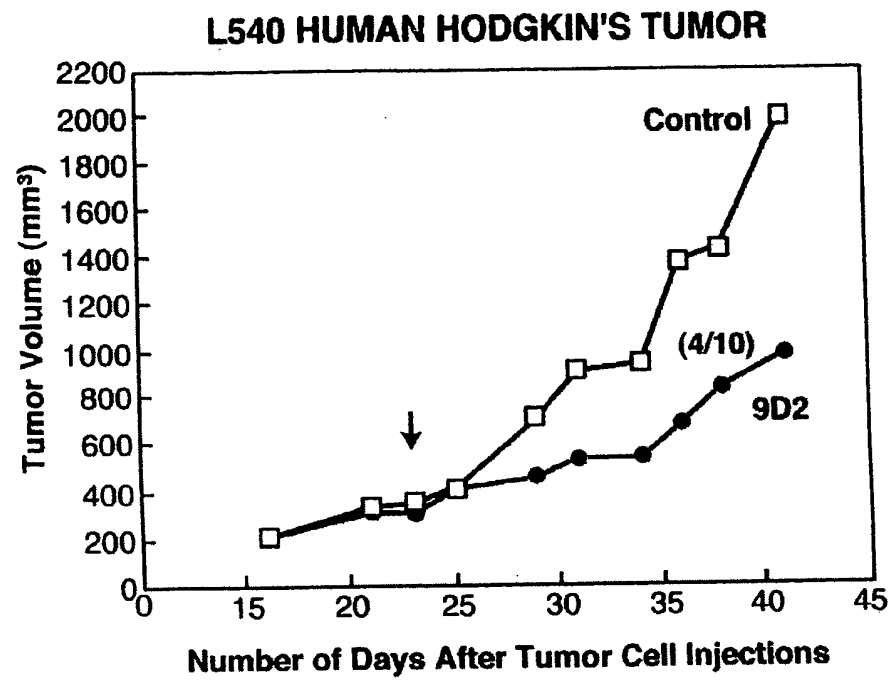


FIG. 7

# SYNGENEIC METH A TUMORS

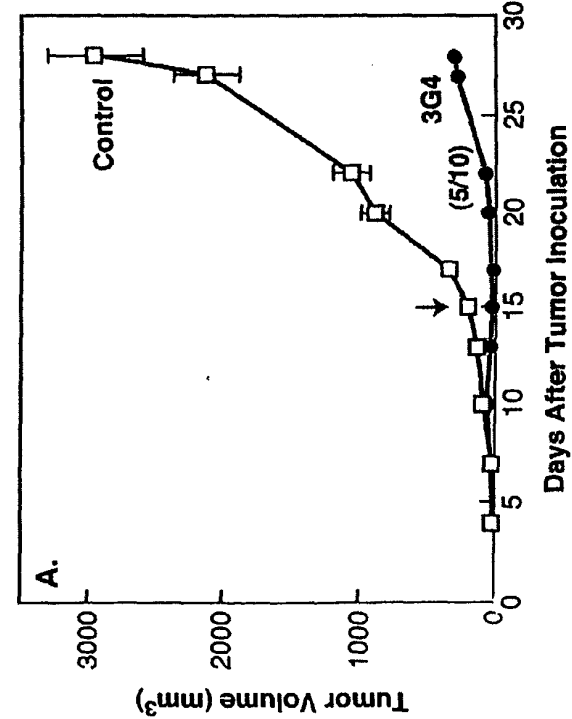


FIG. 8A

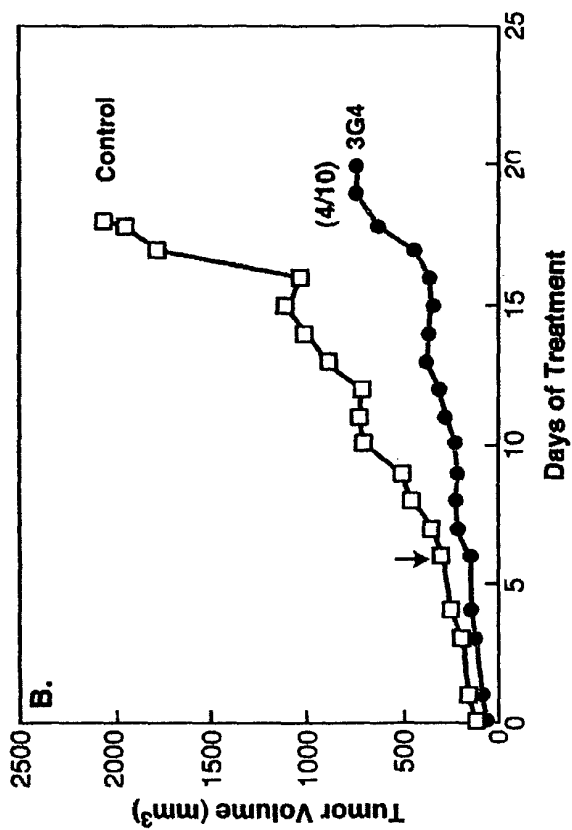


FIG. 8B

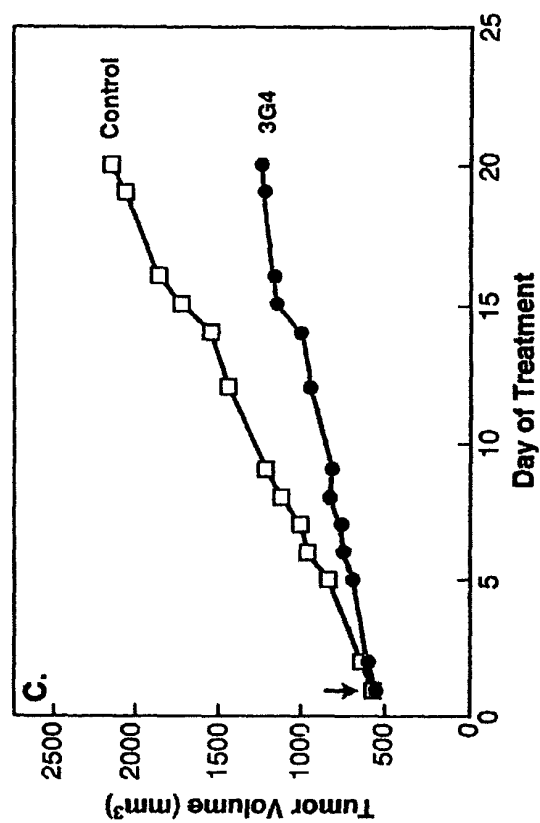
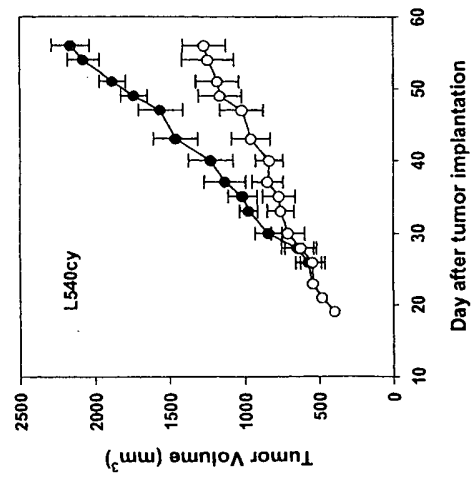
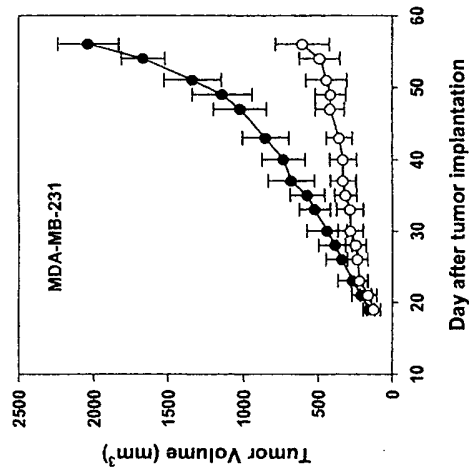


FIG. 8C

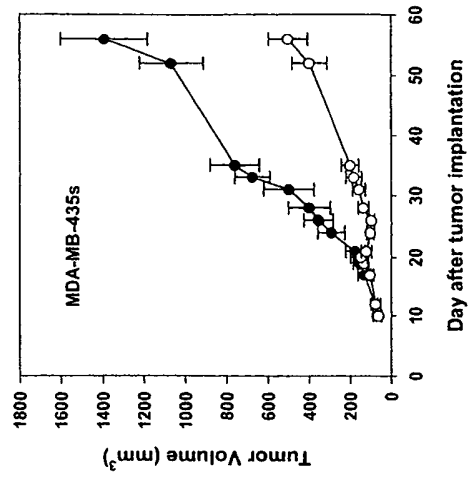




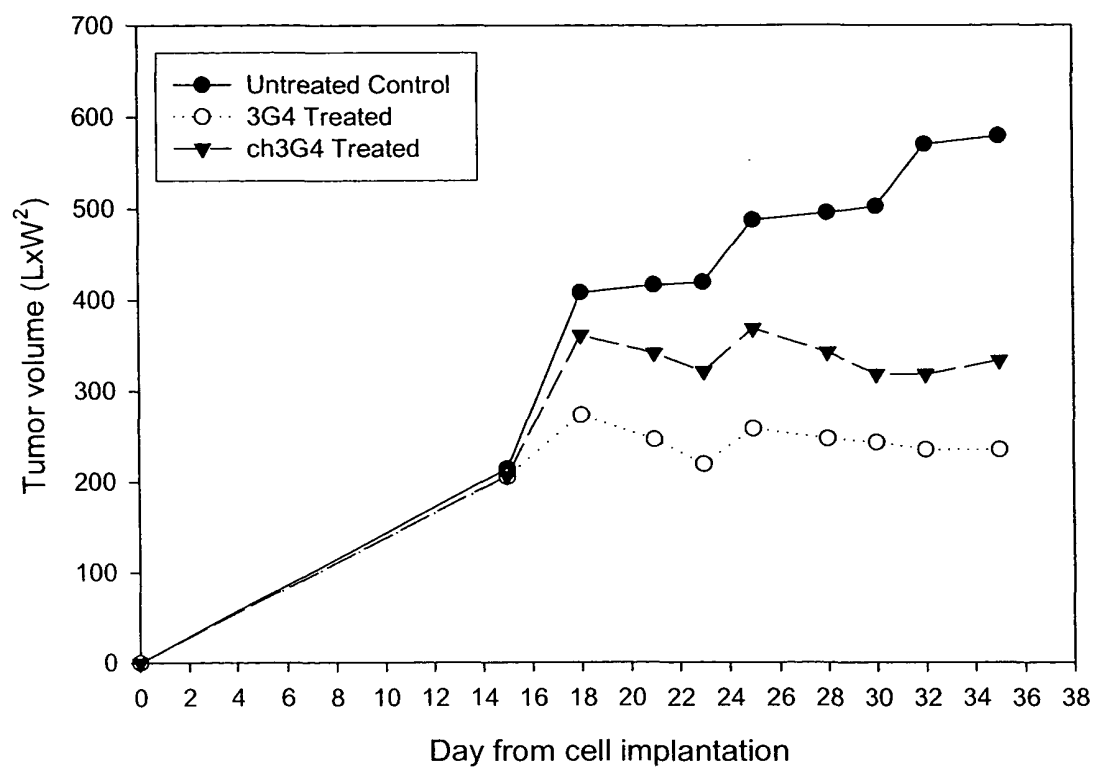
**FIG. 8D**



**FIG. 8E**



**FIG. 8F**



**FIG. 8G**

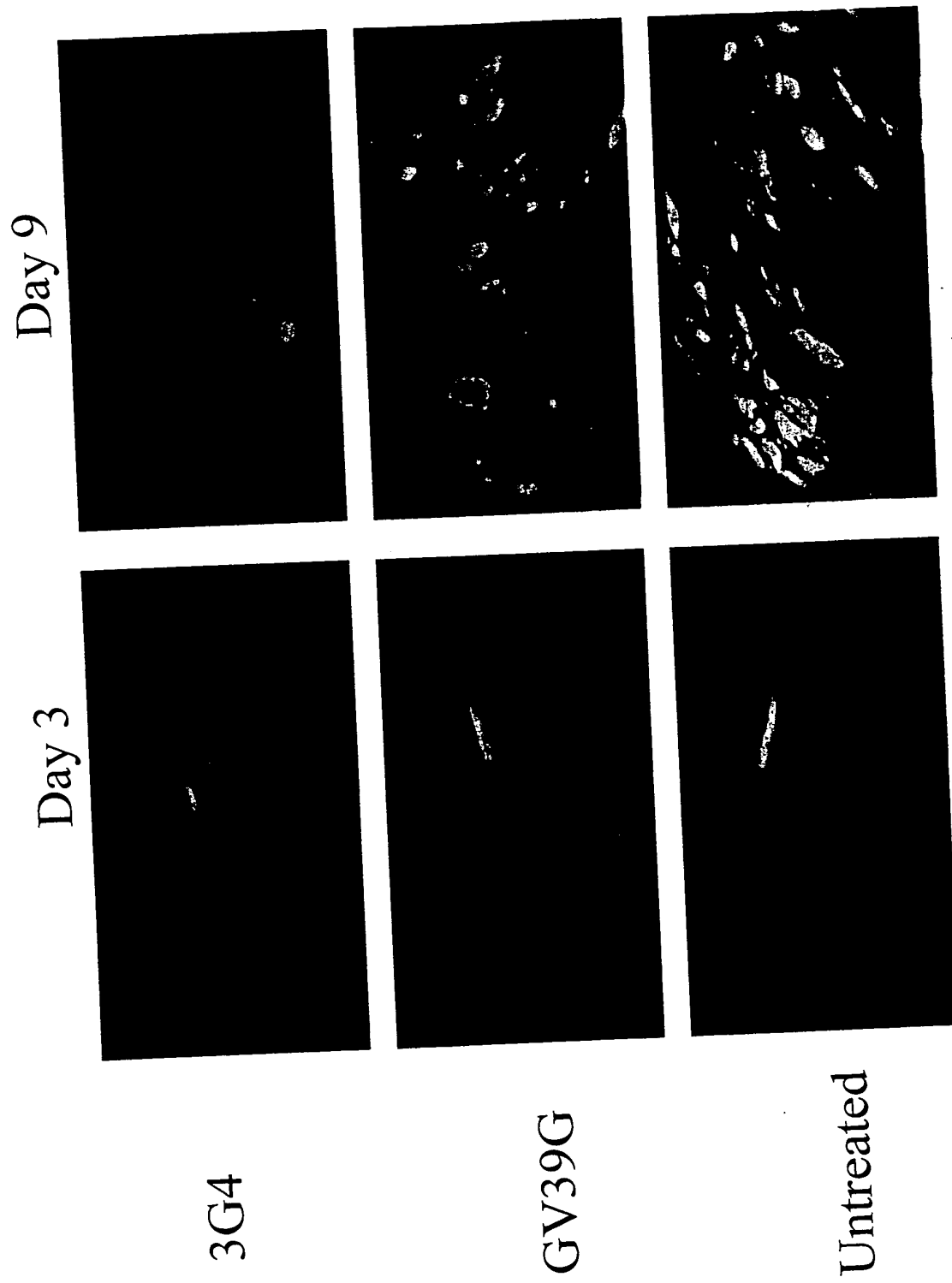


FIG. 9A

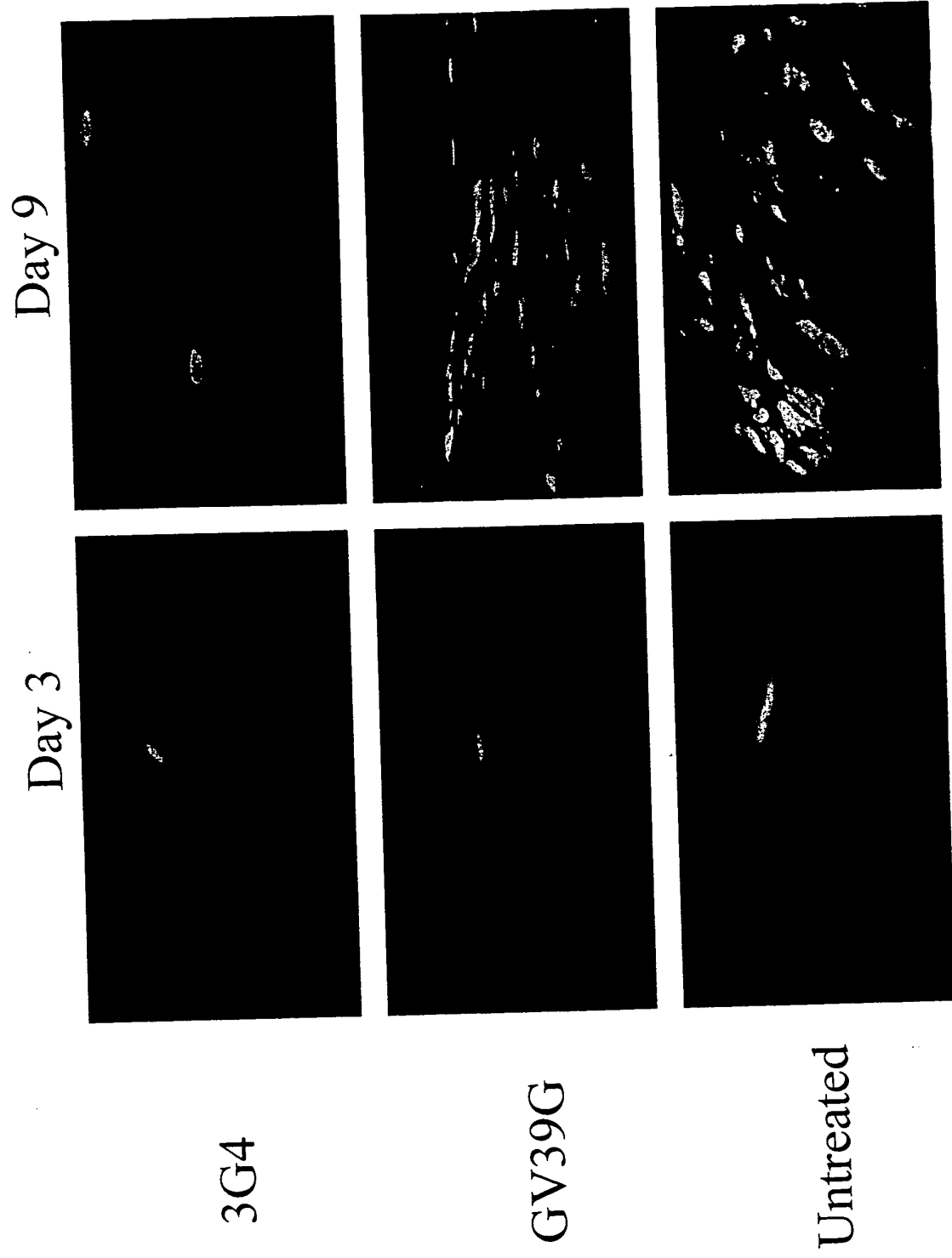


FIG. 9B

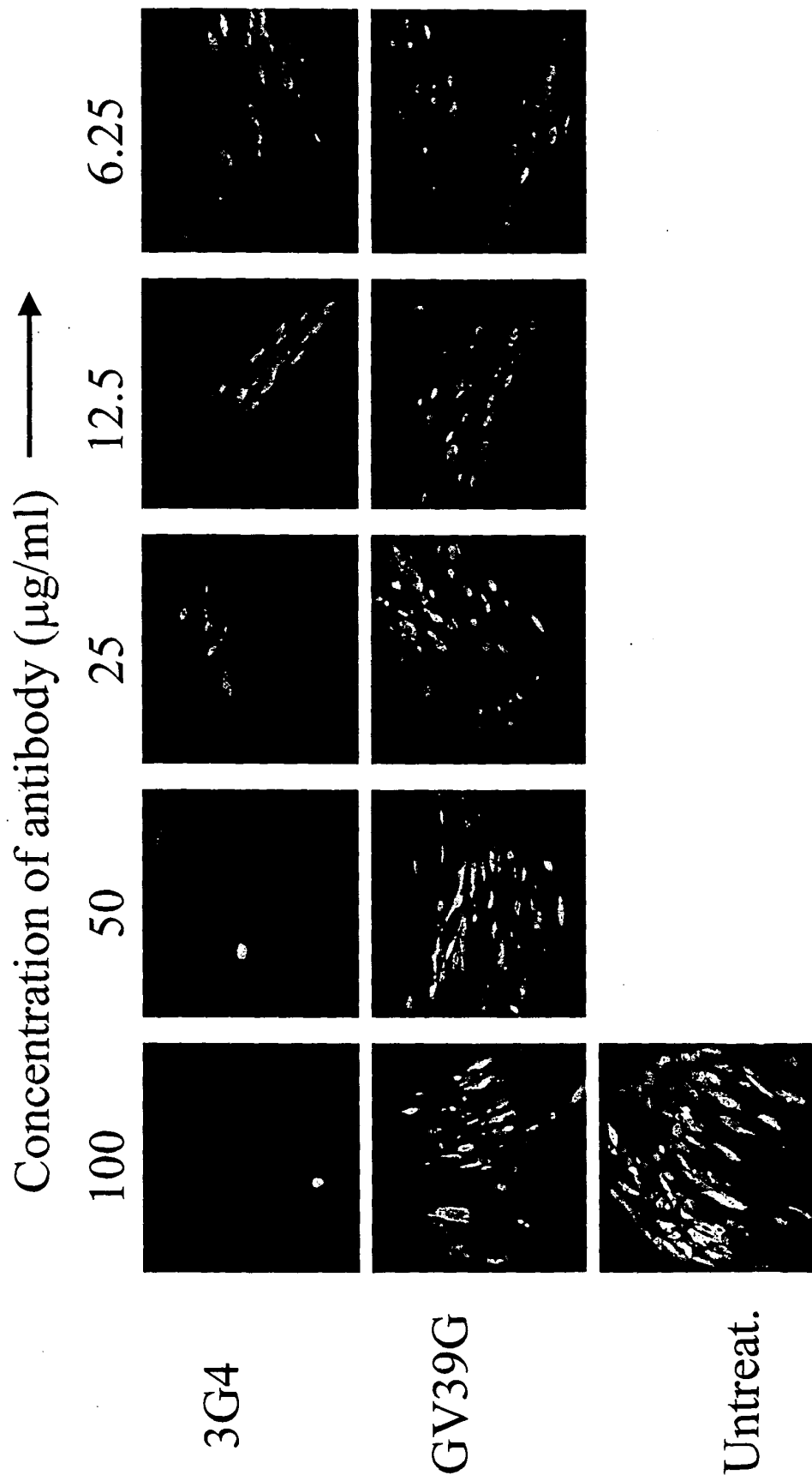


FIG. 10

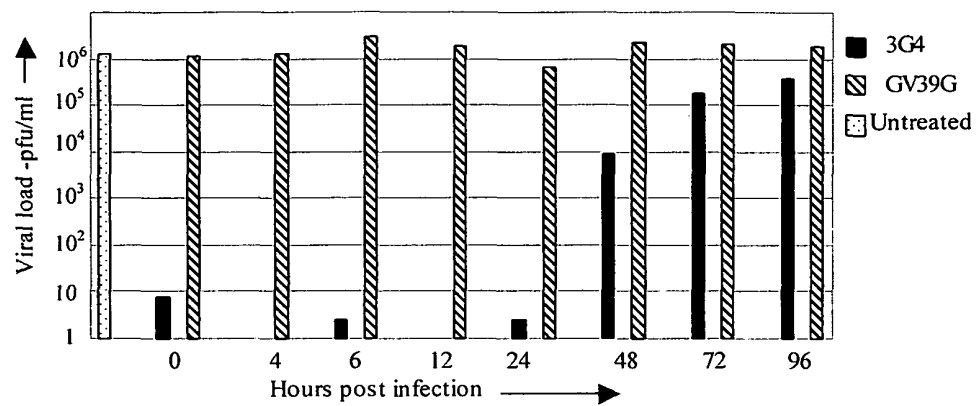


FIG. 11C

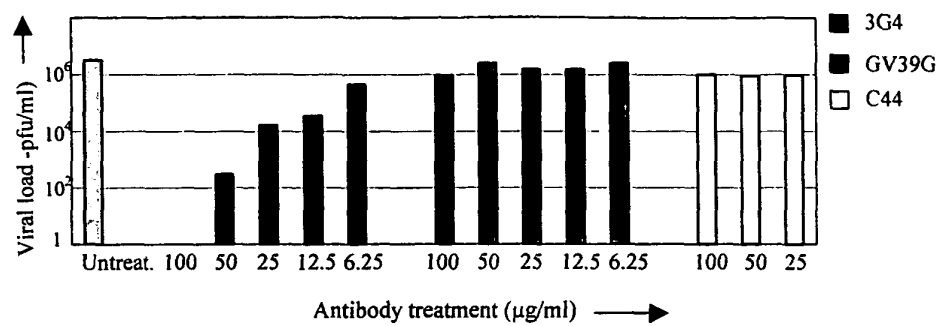


FIG. 11A

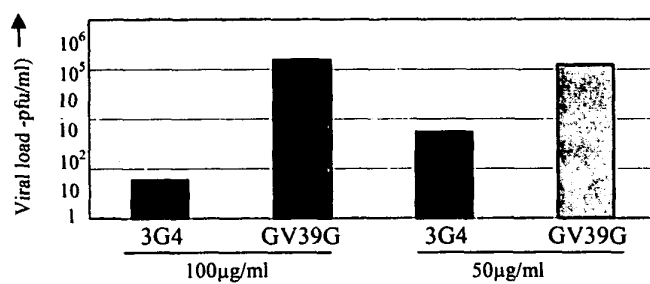


FIG. 11B

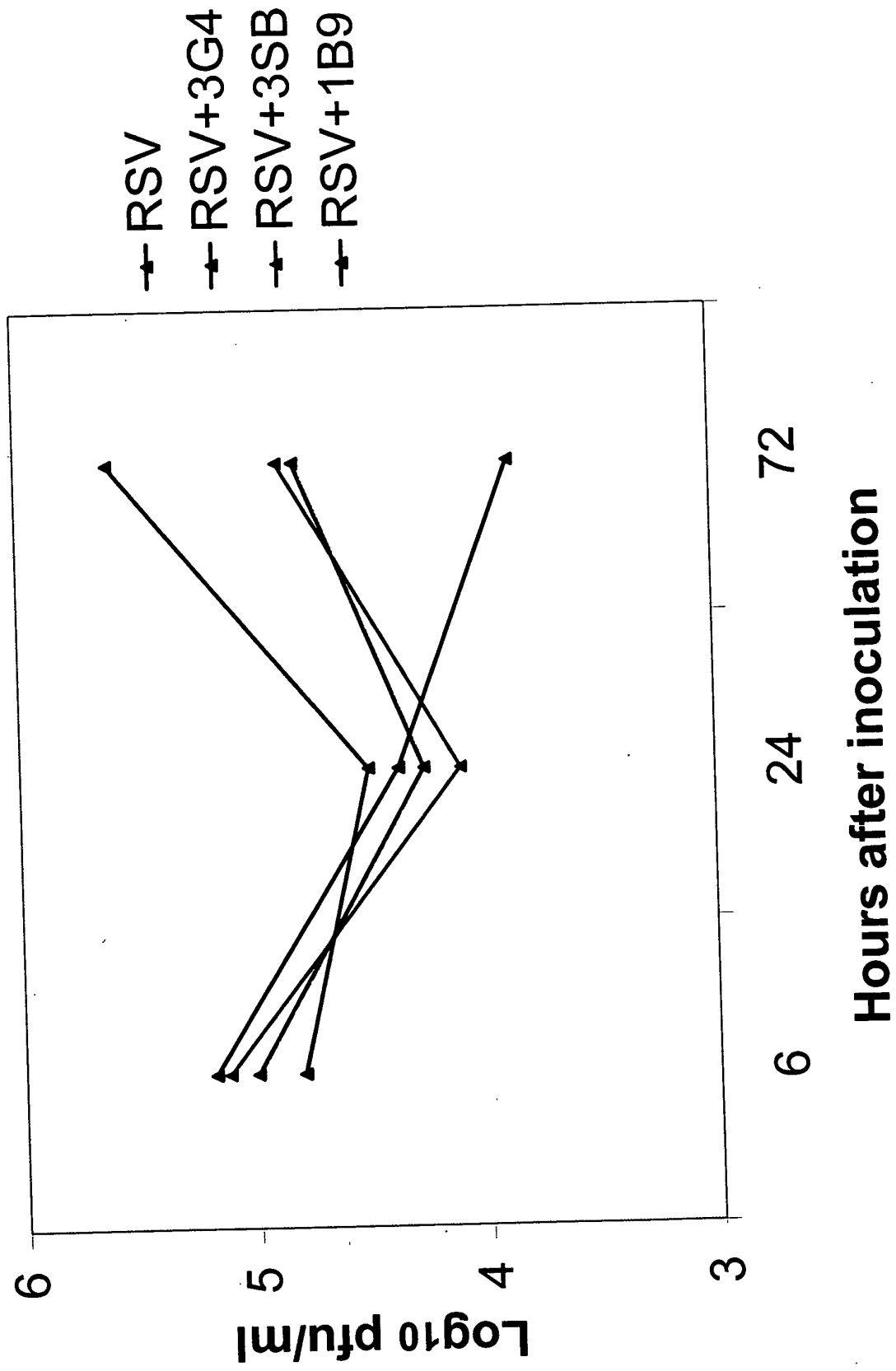


FIG. 12



FIG. 13A. DLB      Duramycin — NH . CO . (CH<sub>2</sub>)<sub>5</sub> . NH . CO — biotin

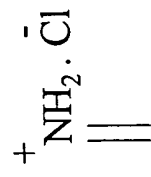
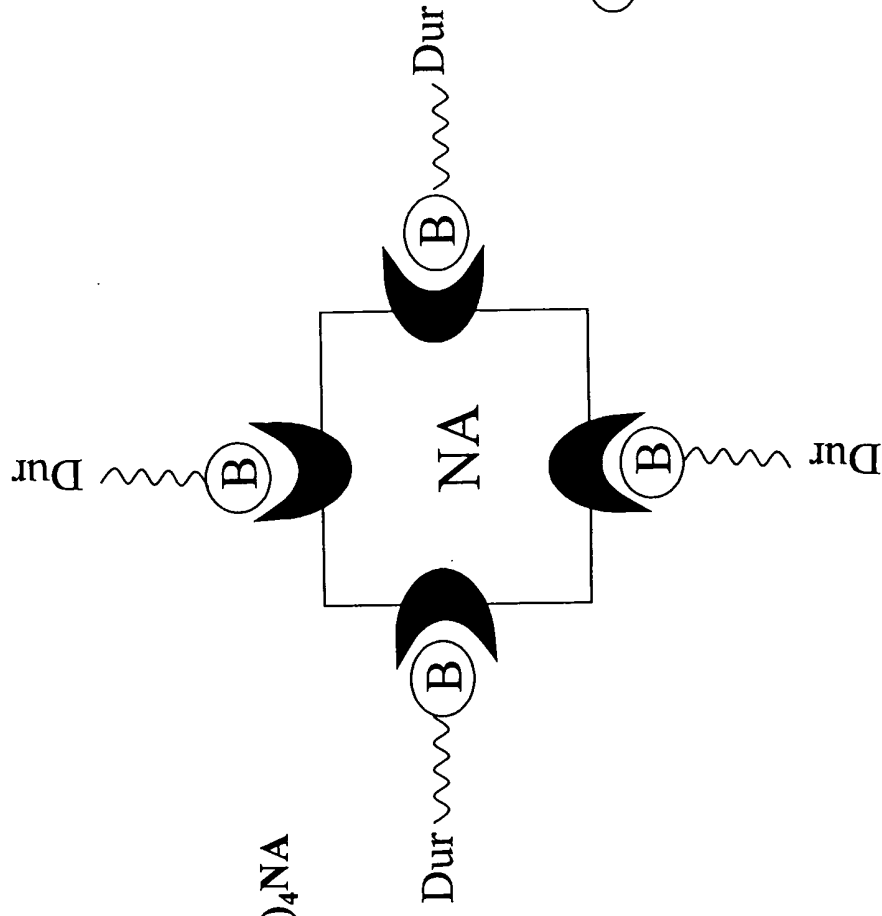


FIG. 13B. DIB      Duramycin — NH . C . (CH<sub>2</sub>)<sub>3</sub> . S . CH<sub>2</sub> . CO . NH . (CH<sub>2</sub>)<sub>6</sub> . NH . CO — biotin

FIG. 13C. (DLB)<sub>4</sub>NA



NA = neutravidin

(B) = biotin

Dur = Duramycin

Dur ~~~~~ (B) = DLB

FIG. 13D. (DLB)<sub>4</sub>NA-F

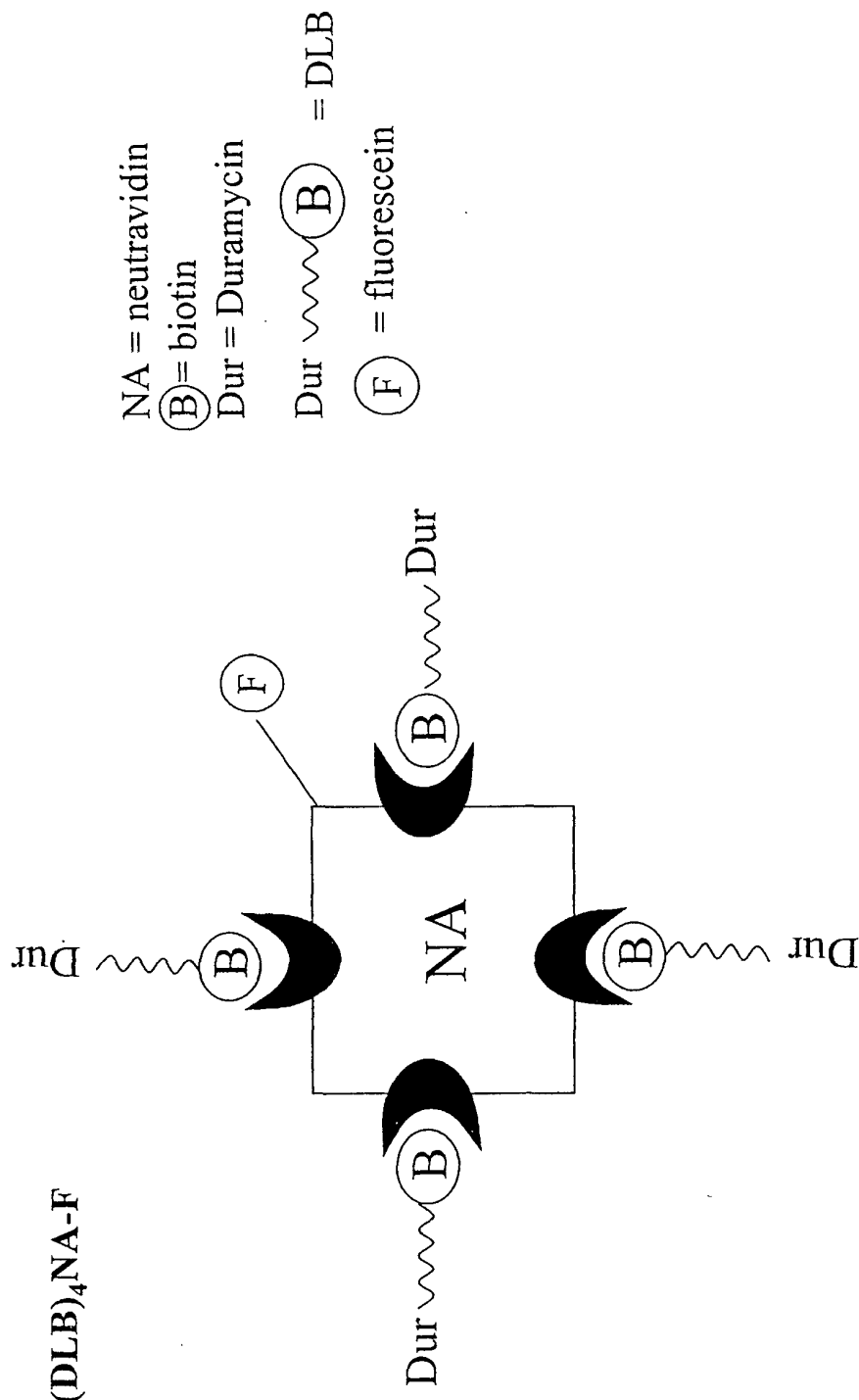
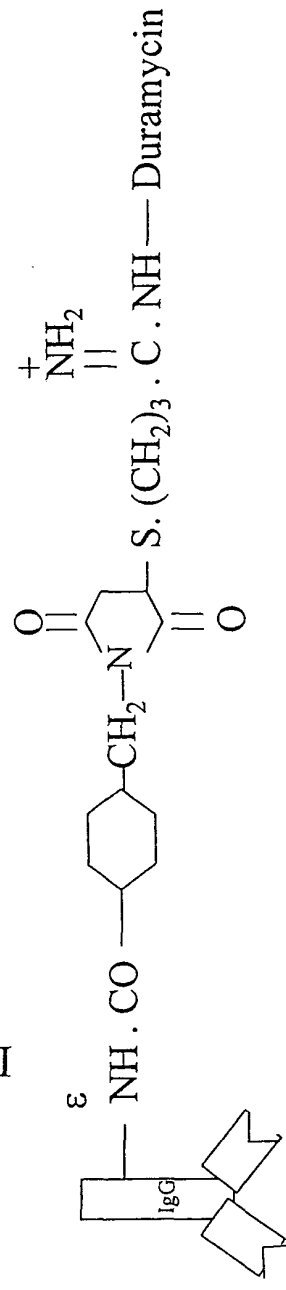
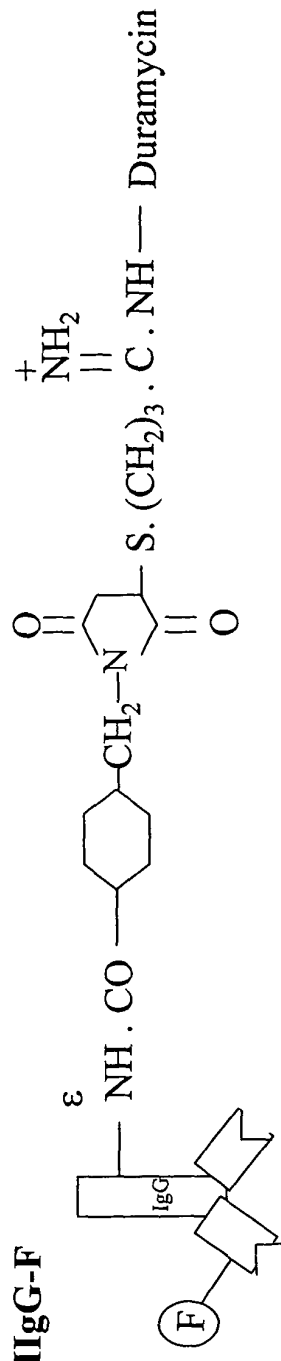


FIG. 13E. (DIM)<sub>n</sub> HIgG



n = 5 to 8 Duramycin residues per IgG  
 Monomer (150,000 Da) is shown

FIG. 13F. (DIM)<sub>n</sub> HIgG-F

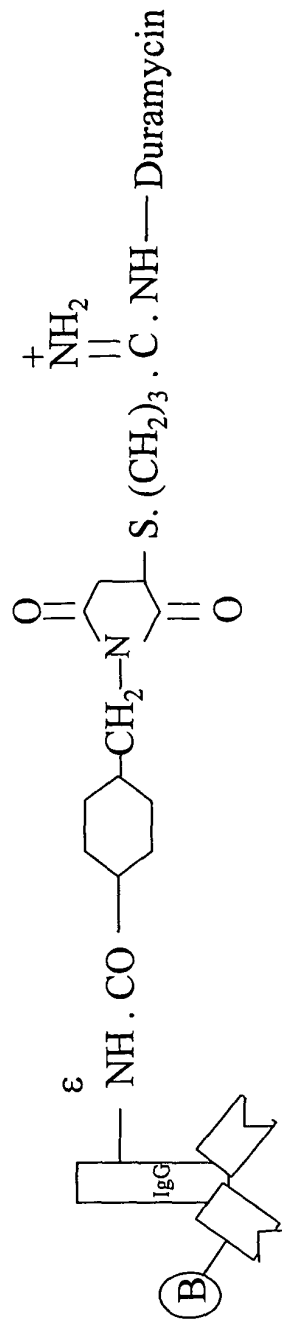


n = 5 to 8 Duramycin residues per IgG

(F) = fluorescein

Monomer (150,000 Da) is shown

FIG. 13G. (DIM)<sub>n</sub> HIgG-B



n = 5 to 8 Duramycin residues per IgG

(B) = biotin

Monomer (150,000 Da) is shown

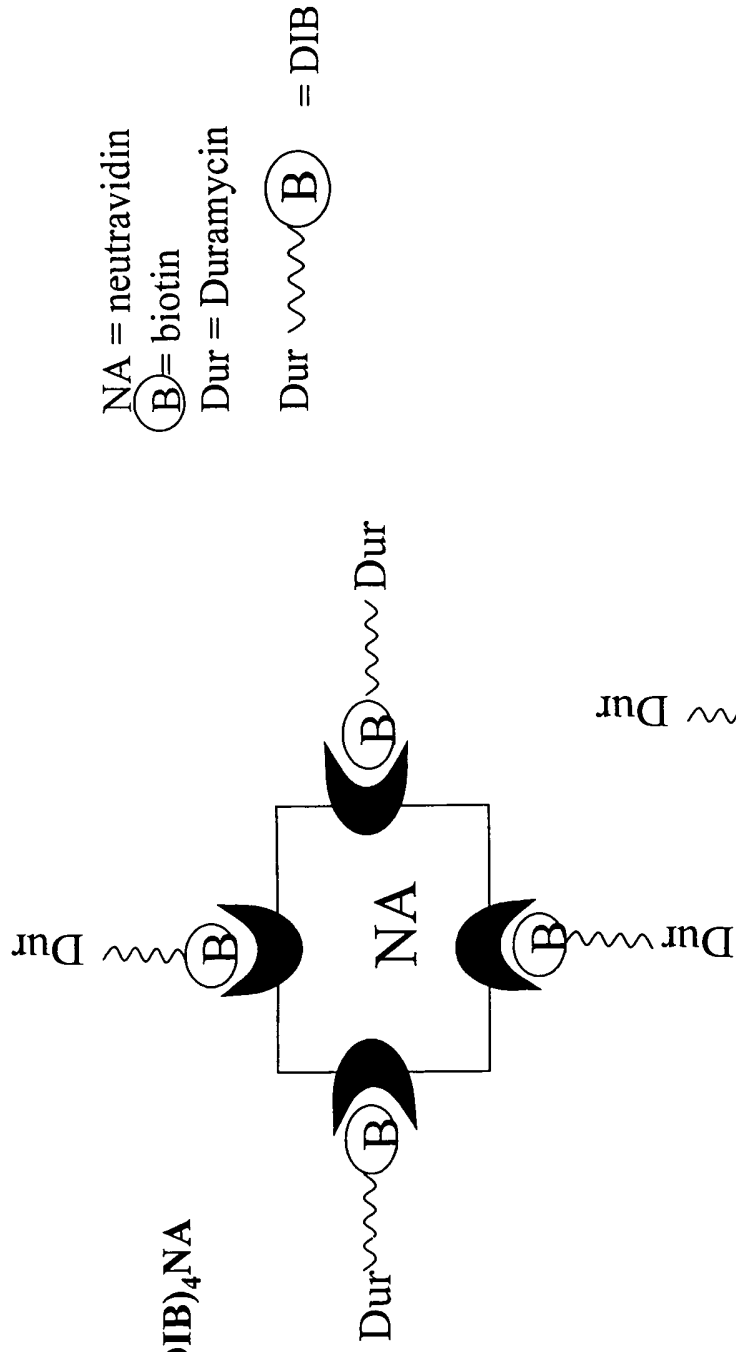


FIG. 13H. (DIB)<sub>4</sub>NA

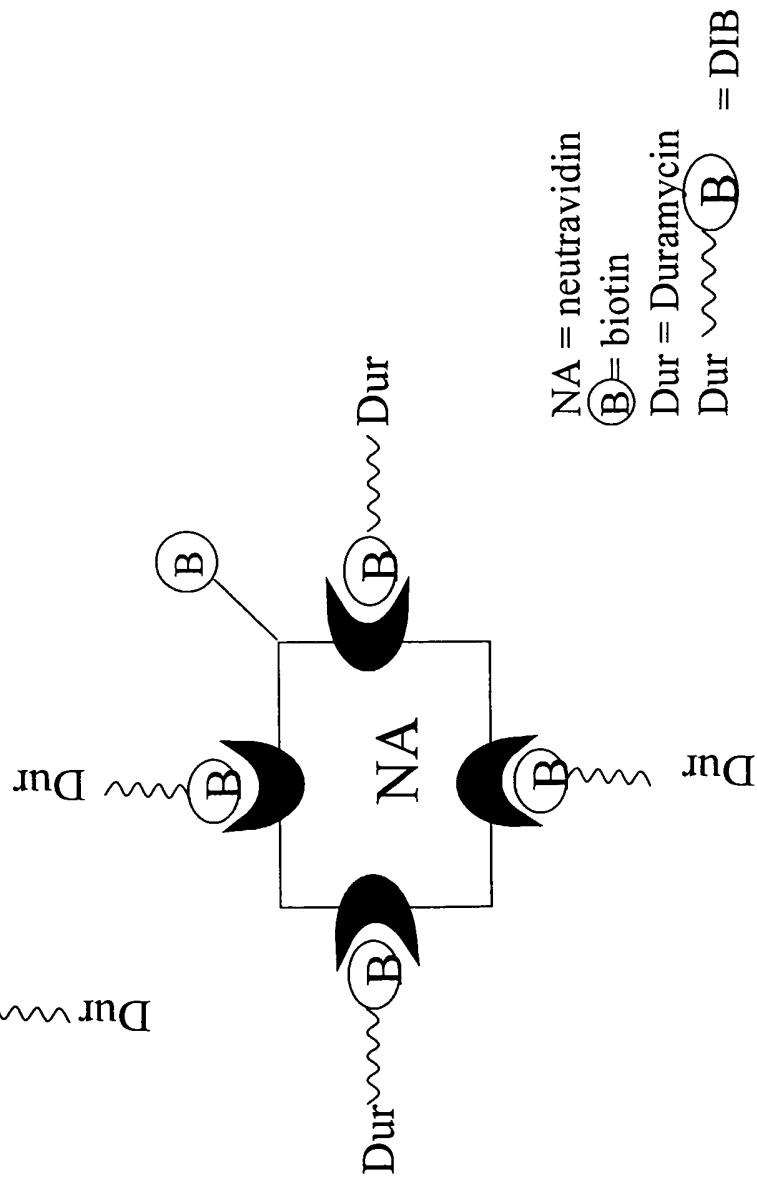
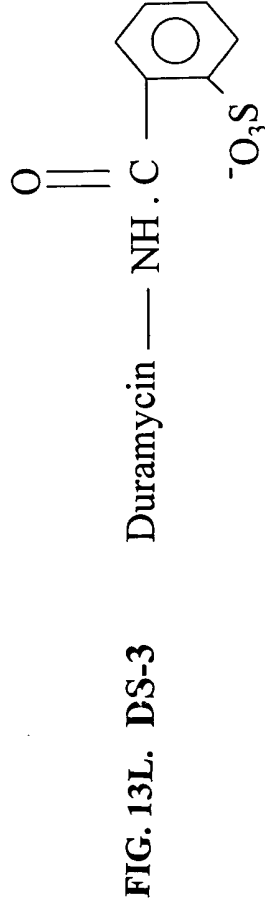
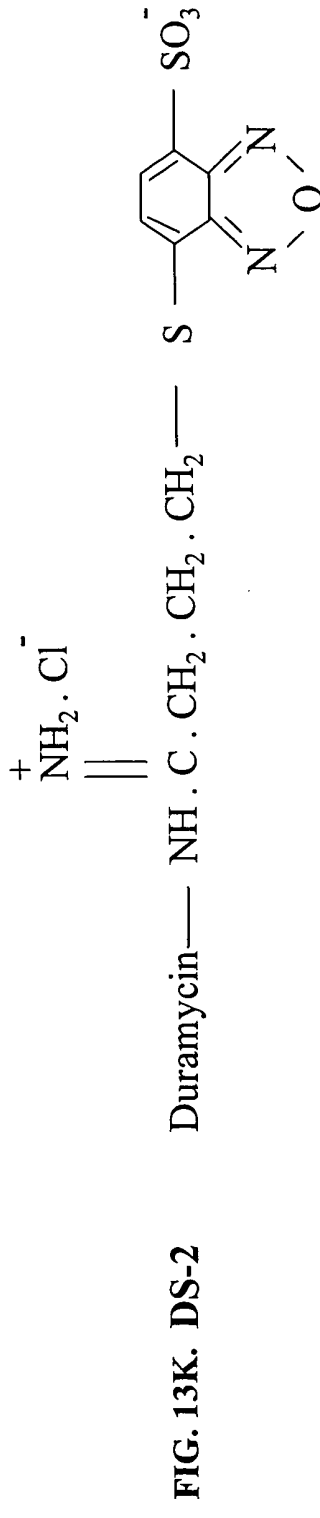
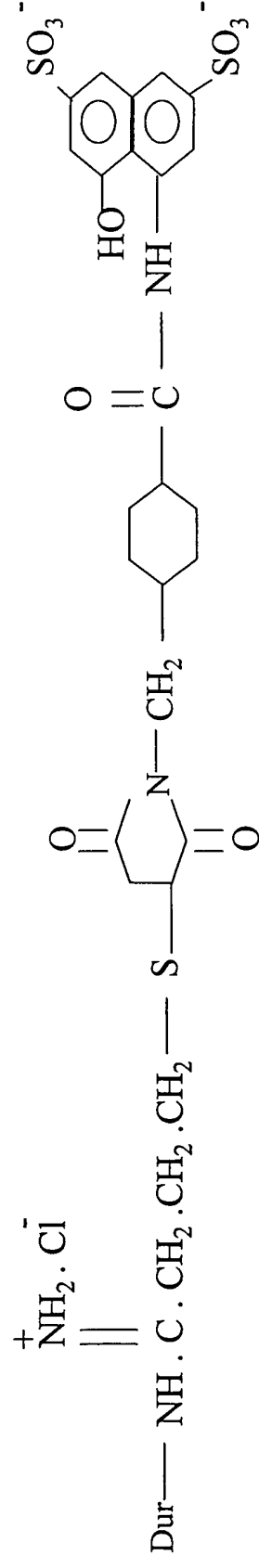
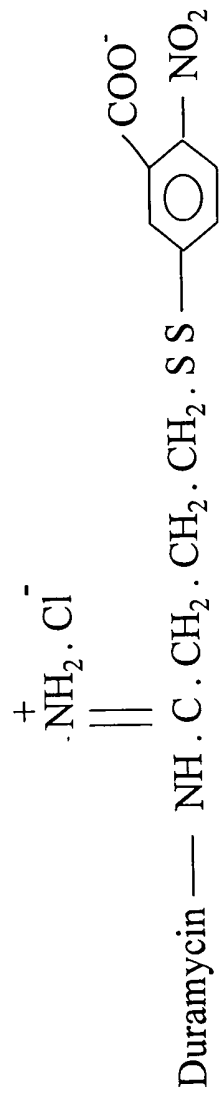
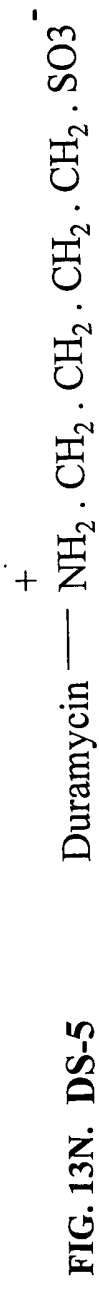


FIG. 13I. (DIB)<sub>4</sub>NA-B



**FIG. 13M. DS-4**





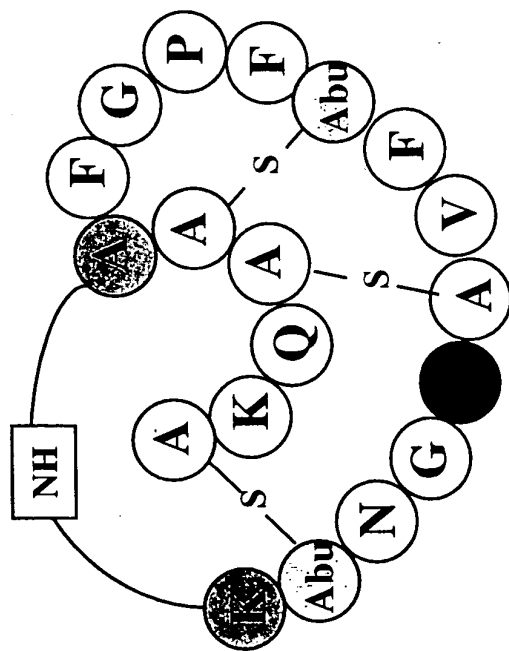
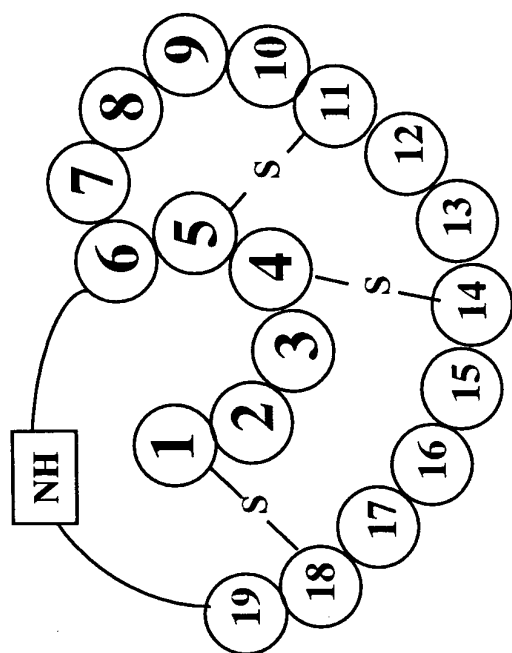
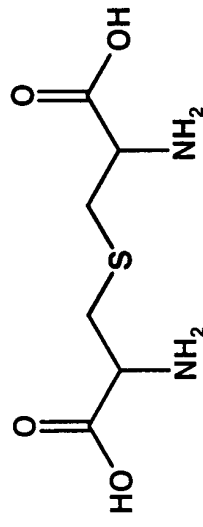
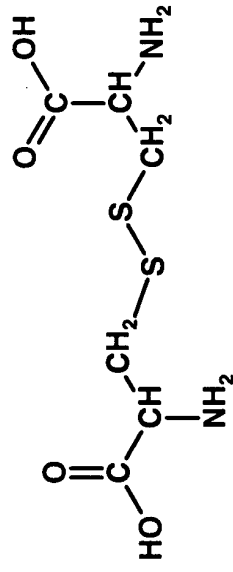


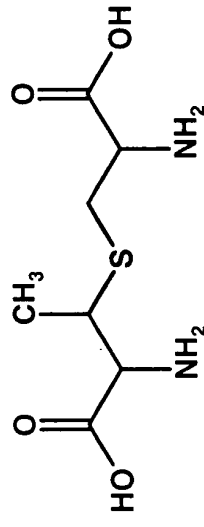
FIG. 13P



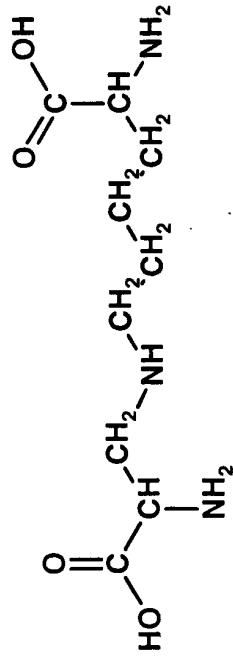
**Lanthionine**  
**Ala-S-Ala**



**cystine**



**β-methylanthionine**  
**Abu-S-Ala**

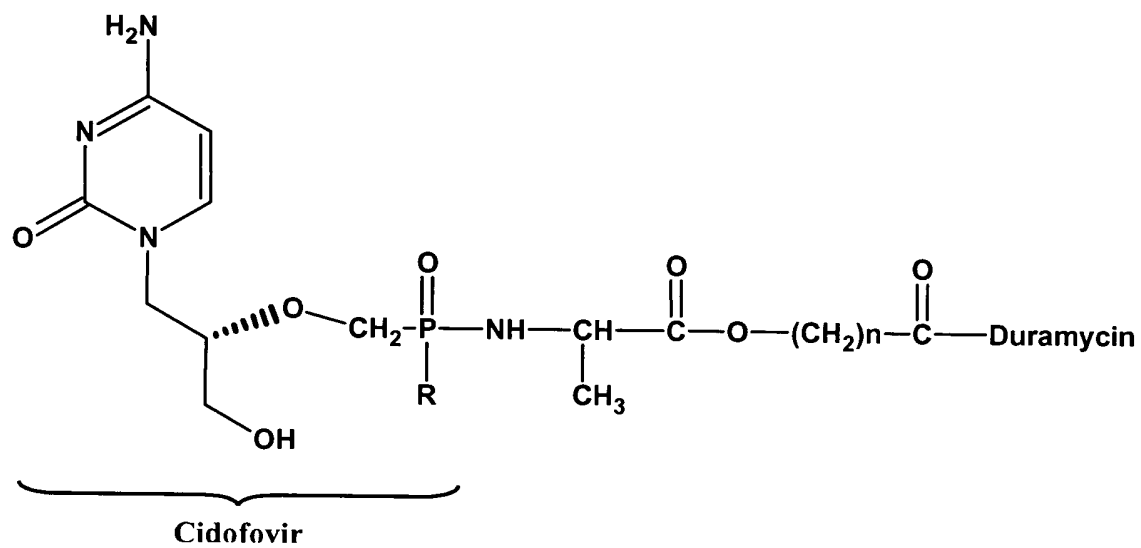


**Lysinoalanine**  
**Ala-NH-Lys**

**FIG. 13Q**



FIG. 13R



R= OH, as in cidofovir, or labile hydrophobic group

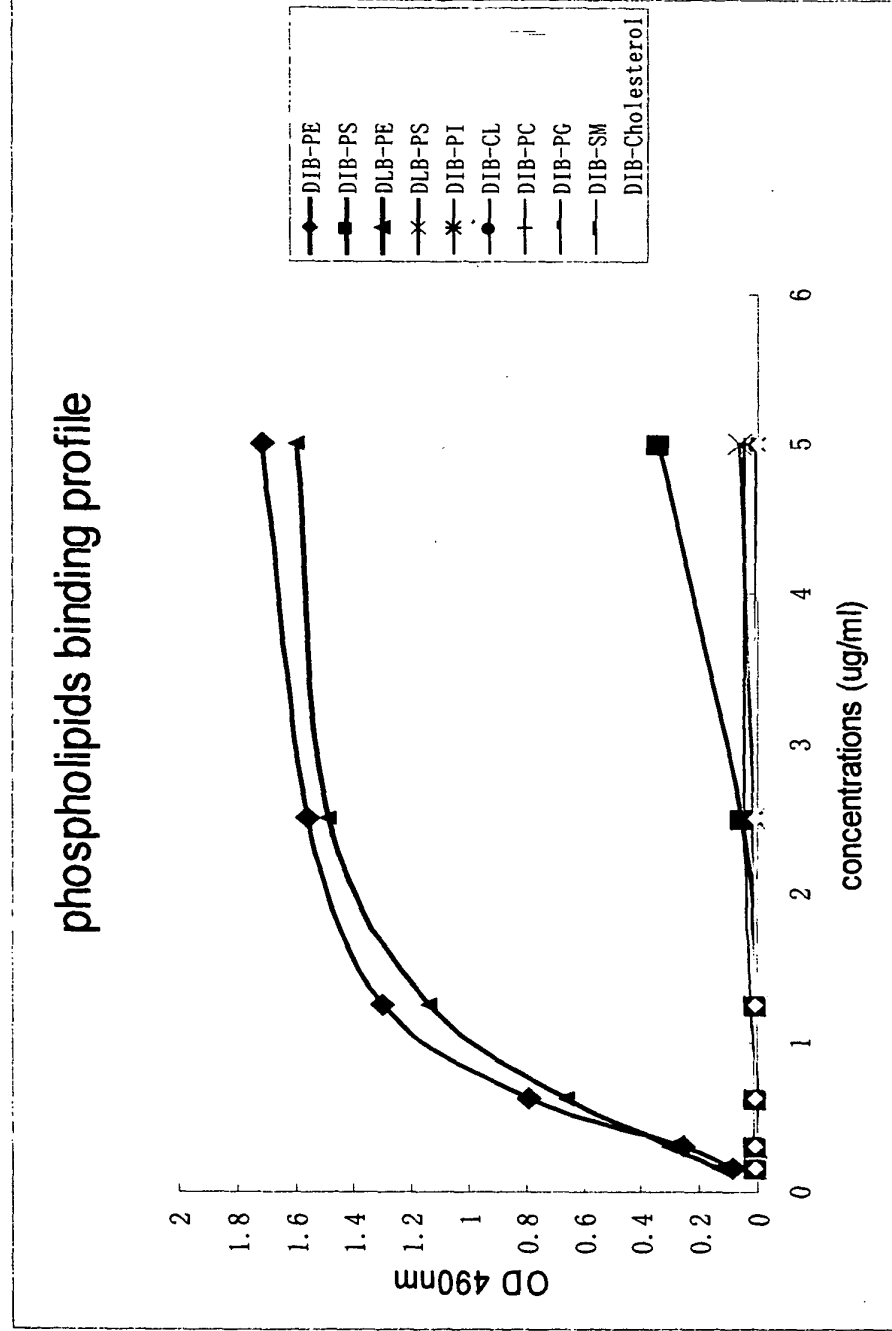


FIG. 14A

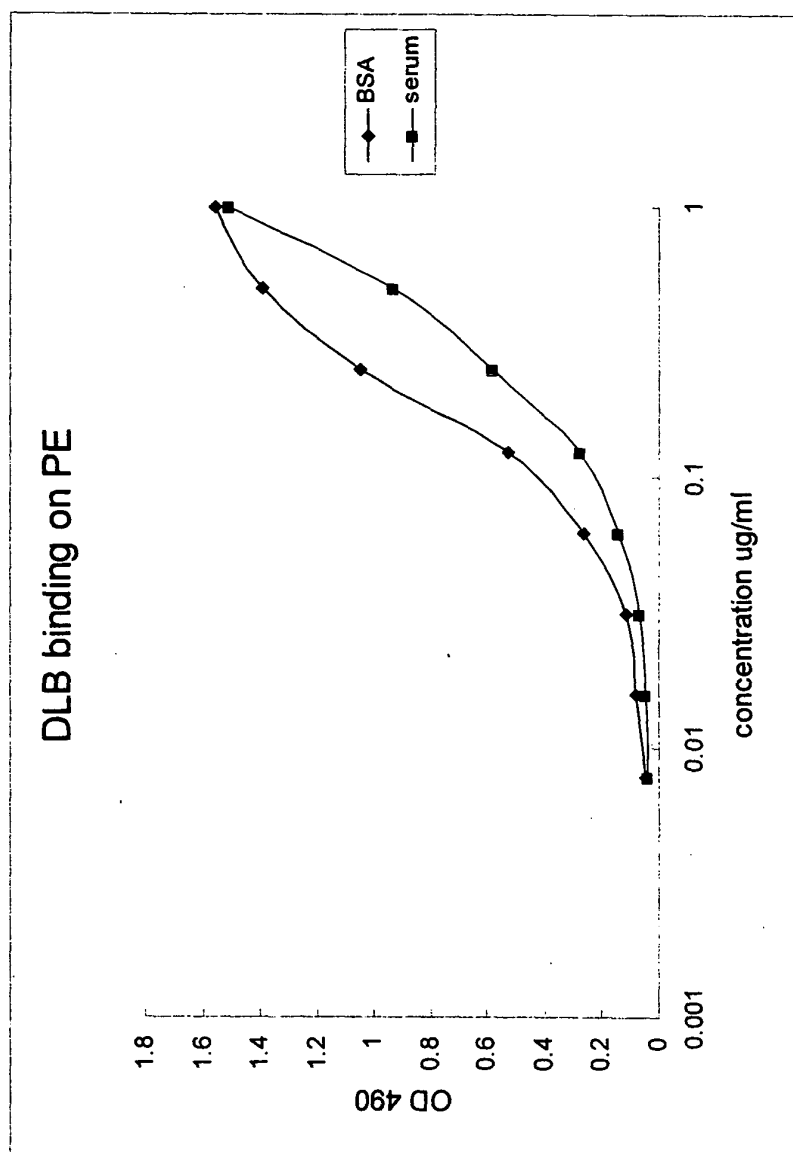


FIG. 14B

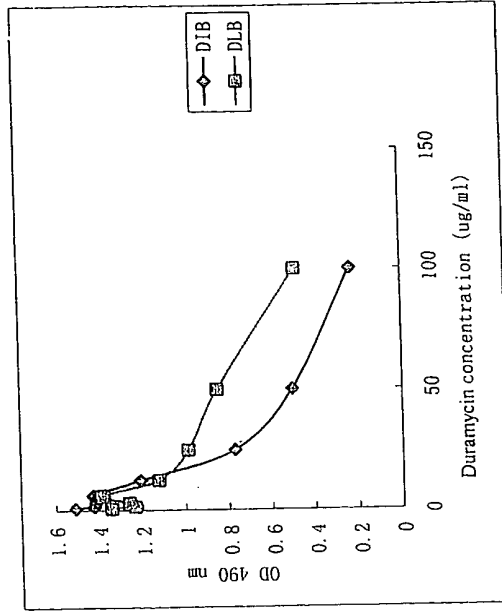


FIG. 14D

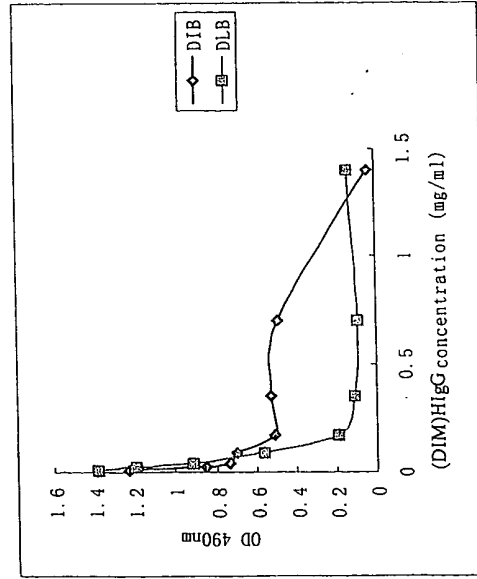


FIG. 14C

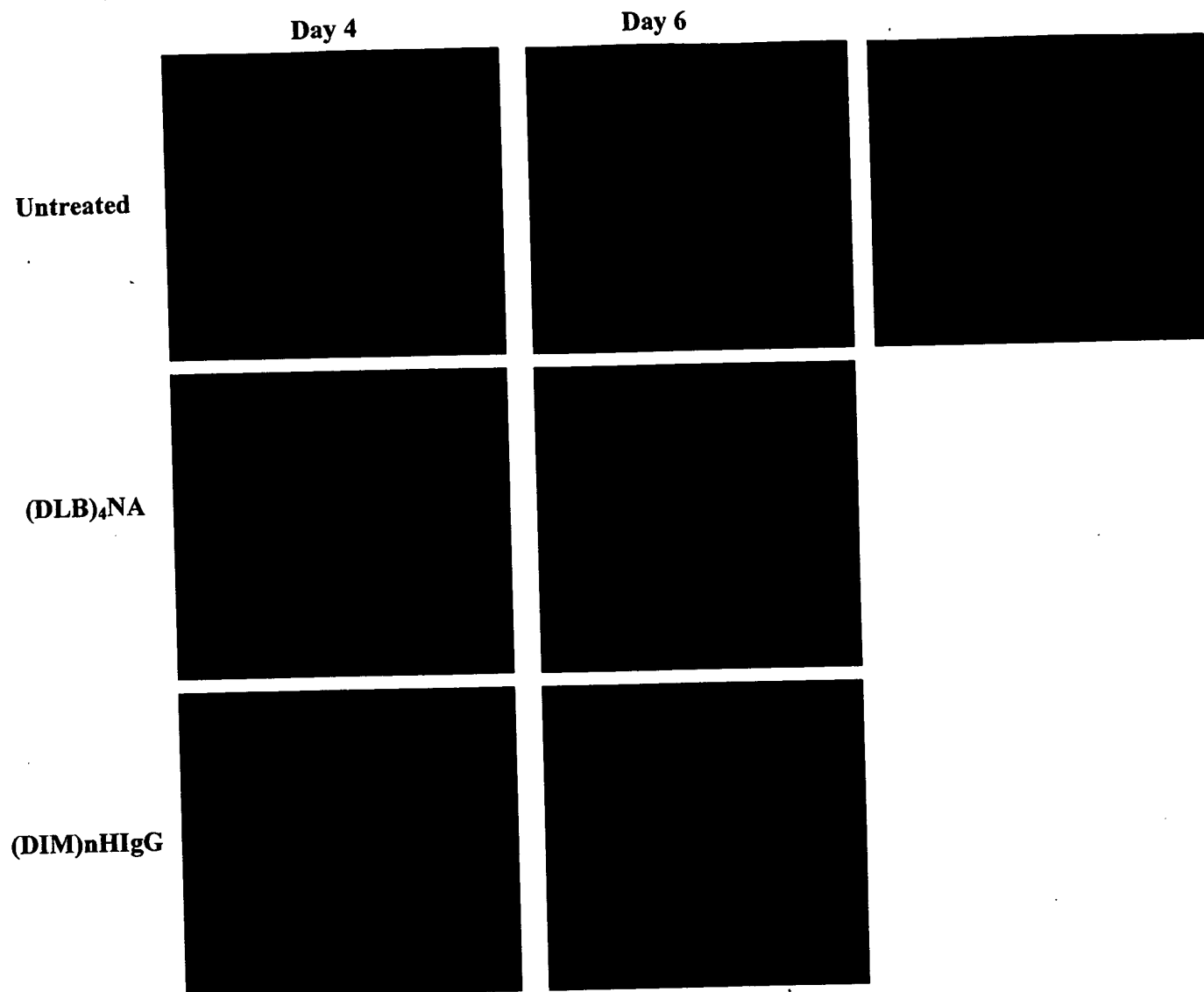


FIG. 15

# SELECTIVE INHIBITION OF DIVIDING ENDOTHELIAL CELLS BY ANTI-PS ANTIBODIES

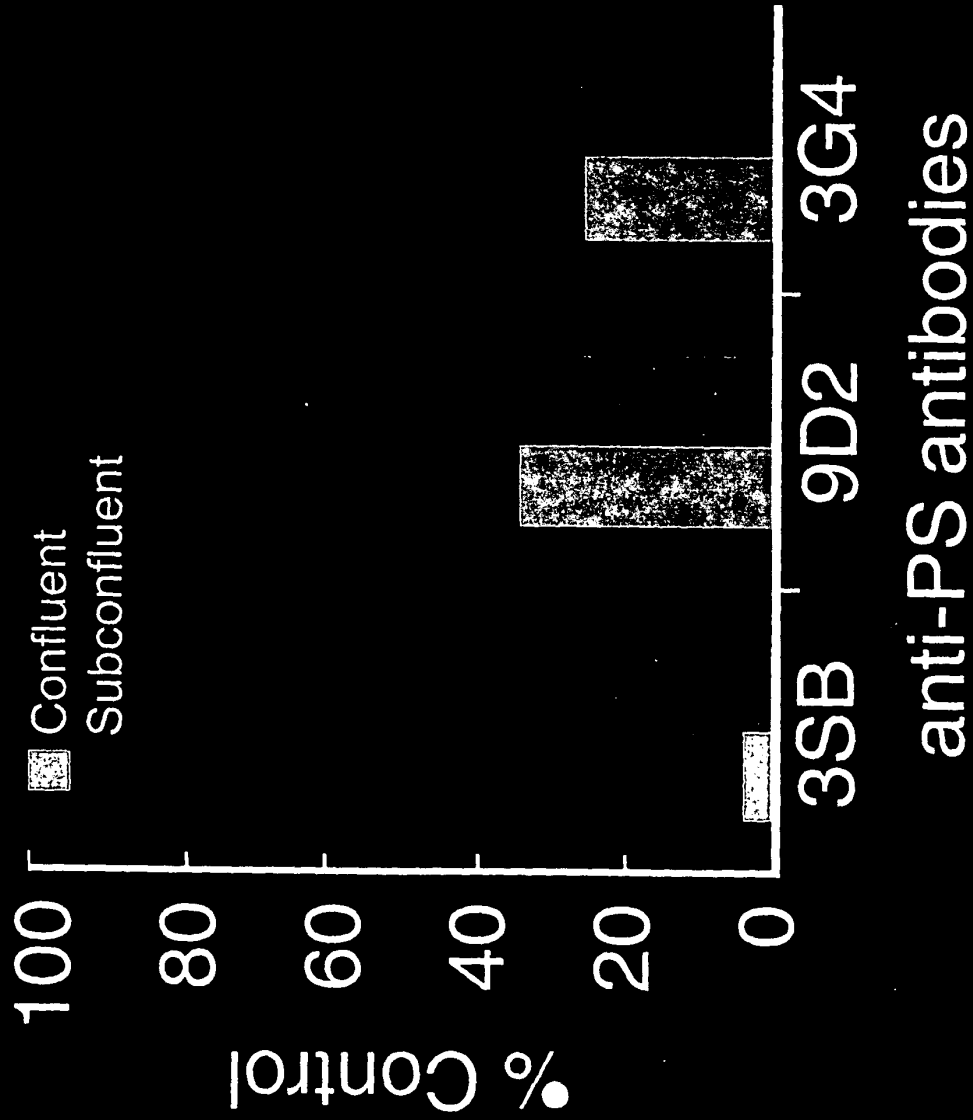


FIG. 16

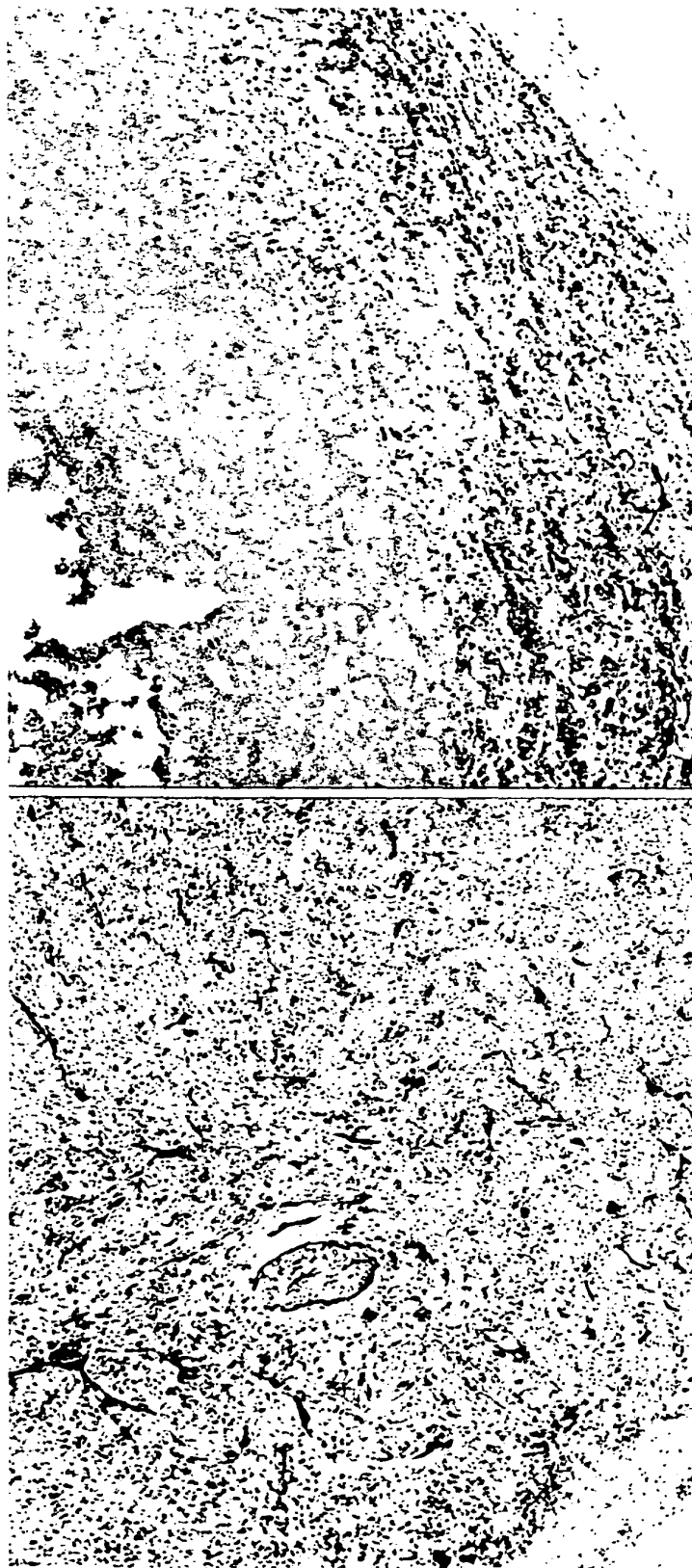


FIG. 17A

Control Treated

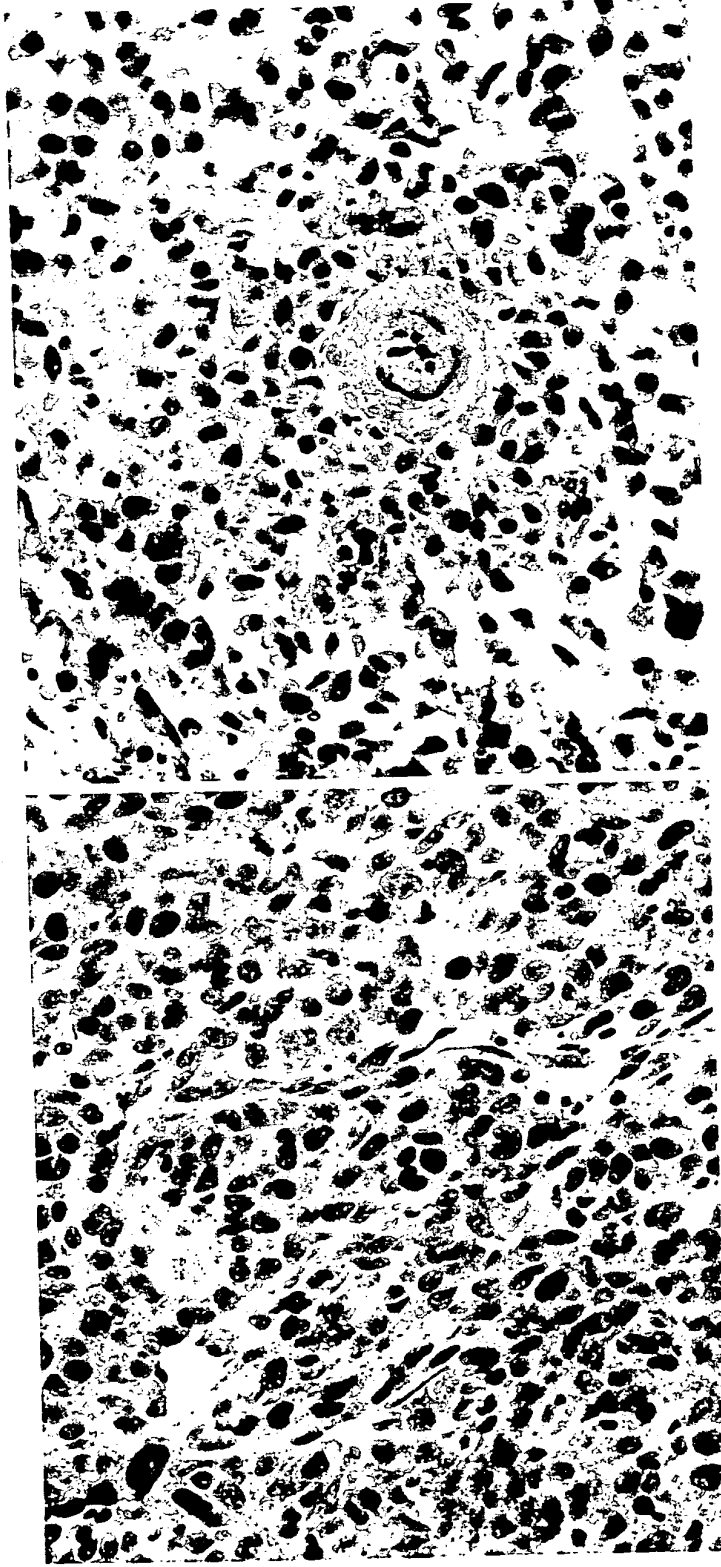


FIG. 17B



FIG. 18A

**3G4-2BVH original sequence:**

									M	G	W	T	W	I	F	I	L	I	L	S	V
121									ATG	GGA	TGG	ACC	TGG	ATC	TTT	ATT	TTA	ATC	CTG	TCA	GTA
									TAC	CCT	ACC	TGG	ACC	TAG	AAA	TAA	AAT	TAG	GAC	AGT	CAT
									PvuII												
									~~~~~												
181		T	T	G	V	H	S	E	V	Q	L	Q	Q	S	G	P	E	L	E	K	P
	ACT	ACA	GGT	GTC	CAC	TCT	GAG	GTC	GTC	CAG	CTG	CAG	CAG	TCT	GGA	CCT	GAG	CTG	GAG	AAG	CCT
	TGA	TGT	CCA	CAG	GTG	AGA	CTC	CAG	GTC	GAC	GTC	GTC	GTC	AGA	CCT	GGA	CTC	GAC	CTC	TTC	GGA
	G	A	S	V	K	L	S	C	K	A	S	G	Y	S	F	T	G	Y	N	M	
241	GGC	GCT	TCA	GTG	AAG	CTA	TCC	TGC	AAG	GCT	TCT	GGT	TAC	TCA	TTC	ACT	GGC	TAC	AAC	ATG	
	CGC	GGA	AGT	CAC	TTC	GAT	AGG	AGC	TTC	CGA	AGA	CCA	ATG	AGT	AAG	TGA	CCG	ATG	TTG	TAC	
	N	W	V	K	Q	S	H	G	K	S	L	E	W	I	G	H	I	D	P	Y	
301	AAC	TGG	GTG	AAA	CAG	AGC	CAT	GGA	AAG	AGC	CTT	GAA	TGG	ATT	GGA	CAT	ATT	GAT	CCT	TAC	
	TTG	ACC	CAC	TTT	GTC	TCG	GTA	CCT	TTC	TCG	GAA	CTT	ACC	TAA	CCT	GTA	TAA	CTA	GGA	ATG	
	Y	G	D	T	S	Y	N	Q	K	F	R	G	K	A	T	L	T	V	D	K	
361	TAT	GGT	GAT	ACT	TCC	TAC	AAC	CAG	AAG	TTC	AGG	GGC	AAG	GCC	ACA	TTG	ACT	GTA	CAG	AAA	
	ATA	CAC	CTA	TGA	AGG	ATG	TTG	GTC	TTC	AAG	TCC	CCG	TTC	CGG	TGT	AAC	TGA	CAT	CTG	TTT	
	S	S	S	T	A	Y	M	Q	L	K	S	L	T	S	E	D	S	A	V	Y	
421	TCC	TCC	AGC	ACA	GCC	TAC	ATG	CAG	CTC	AAG	AGC	CTG	ACA	TCT	GAG	GAC	TCT	GCA	GTC	TAT	
	AGG	AGG	TCG	TGT	CGG	ATG	TAC	GTC	GAG	TTC	TCG	GAC	TGT	AGA	CTC	CTG	AGA	CGT	CAG	ATA	
	Y	C	V	K	G	G	Y	Y	G	H	W	Y	F	D	V	W	G	A	G	T	
481	TAC	TGT	GTA	AAG	GGG	GGT	TAC	TAC	GGG	CAG	TGG	TAC	TTC	GAT	GTC	TGG	GGC	GCA	GAG	ACC	
	ATG	ACA	CAT	TTC	CCC	CCA	ATG	ATG	CCC	GTG	ACC	ATG	AAG	CTA	CAG	ACC	CCG	CGT	CCC	TGG	
	BstEII																				
	~~~~~																				
541		T	V	T	V	S	S	A	T	T	T	A	P	S	V	Y	P	L	V	P	
	ACG	GTC	ACC	GTC	TCC	TCA	GCT	ACA	ACA	ACA	GCC	CCA	TCT	GTC	TAT	CCC	TTG	GTC	CCG	GGC	
	TGC	CAG	TGG	CAG	AGG	AGT	CGA	TGT	TGT	TGT	CGG	GGT	AGA	CAG	ATA	GGG	AAC	CAG	GGC	CCG	
	BamHI						EcoRI											XhoI			
	~~~~~																				
601	GGA	TCC	CCC	GGG	CTG	CAG	GAA	TTC	GAT	ATC	AAG	CTT	ATC	GAT	ACC	GTC	GAC	CTC	GAG	GGG	
	CCT	AGG	GGG	CCC	GAC	GTC	CTT	AAG	CTA	TAG	TTC	GAA	TAG	CTA	TGG	CAG	CTG	GAG	CTC	CCG	

The RACE product 3G4-2BVH is cloned and grafted onto the human  $\gamma 1$  constant region at the BstEII site. Thus, it contains the mouse leader sequence and its VH is joined with the human CH1 sequence in the following way: leader/3G4VH/VSS-AST...

	Mouse Leader		↓mature protein		
1	MGWTWIFILI	LSVTTGVHSE	VQLQQSGPEL	EKPGASVKLS	CKASGYSFTG
51	YNMNWVKQSH	GKSLEWIGHI	DPYYGDTSYN	QKFRGKATLT	VDKSSSTAYM
				↓BstEII	graft site
101	QLKSLTSEDS	AVYYCVKGGY	YGHWYFDVWG	AGTTVTVSS	ASTKGPSVFPL
151	APSSKSTSG				↑human γ1CH1

**FIG. 18B**

**3G4-2BVL original sequence:**

[illegible]

The RACE product 3G4-2BVL is grafted to human  $\kappa$  constant region at the BbsI site. Thus, it contains the mouse leader sequence and its VL is joined withIN the human CL1 sequence in the following way: leader/3G4-VL/TVF-IFP...

	Mouse Leader		↓mature protein		
1	MDMRAPAQIL	GFLLLLFP	RGD	IQMTQSP	SSLSASLGER VSLTCRASQD
51	IGSSLNWLQQ	GPDGTIKRLI	YATSS	LDLDSGV	PKRFSGSRSG SDYSLTISSL
			FR4↓		↓BbsI graft site
101	ESEDFVDYYC	LQYVSSPPTF	GAGTKLELKR	ADAAPT	VF IFPPSDEQLKSGTAS
					↑ human kappa constant

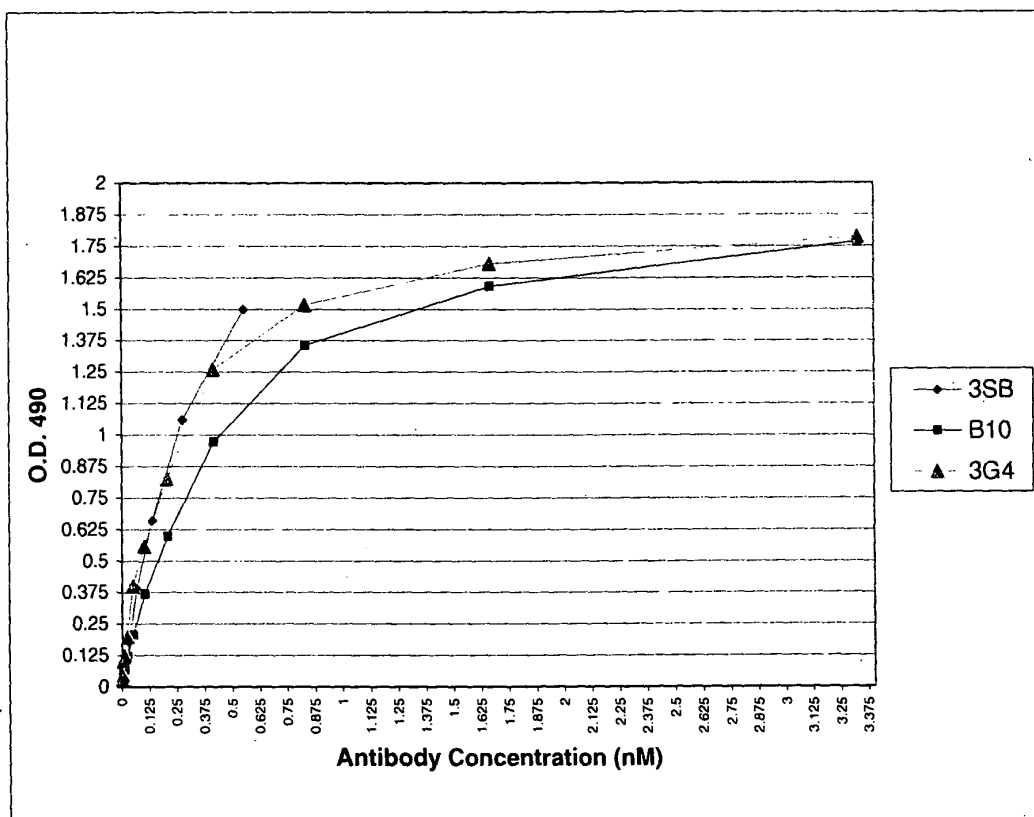


FIG. 19A

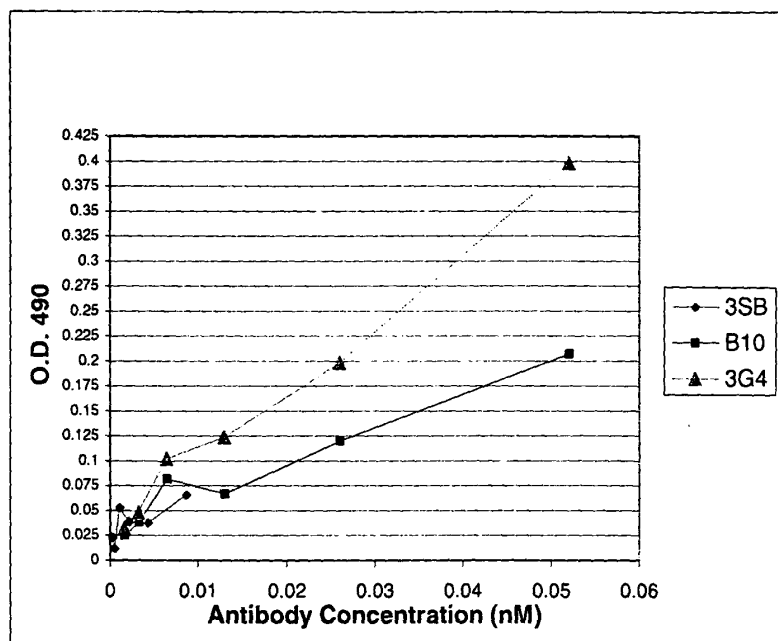
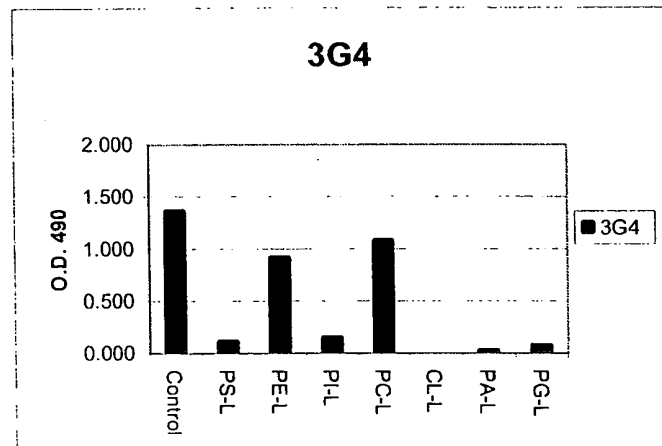


FIG. 19B



**FIG. 20**

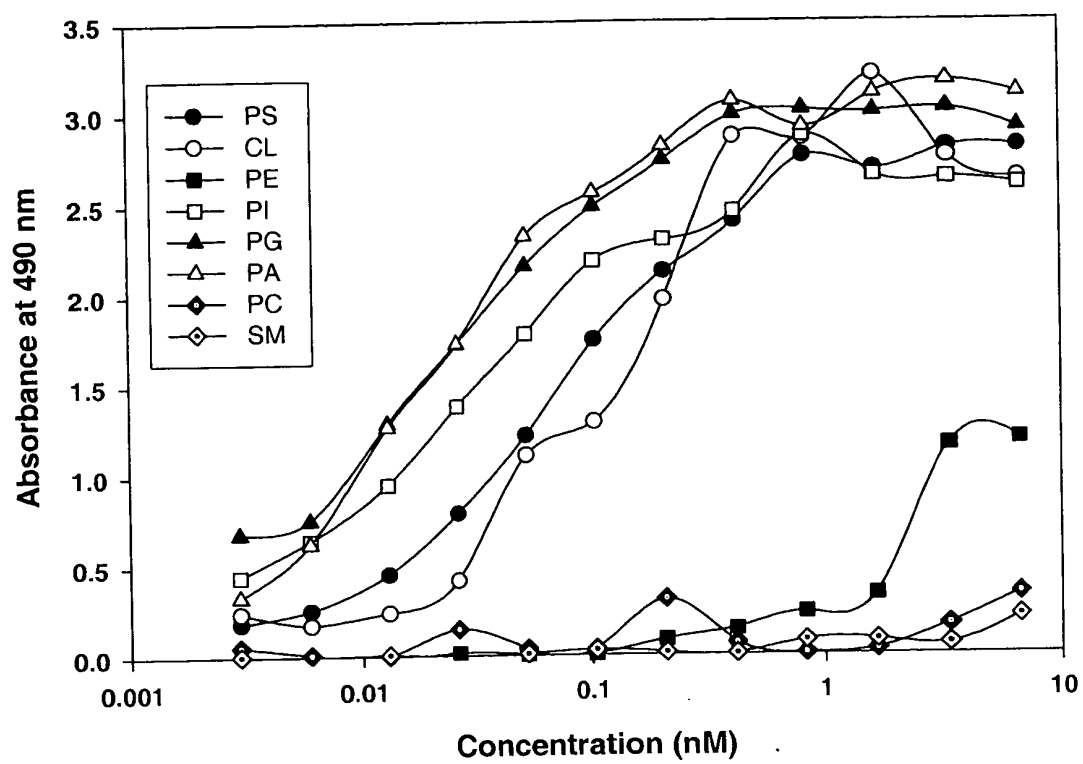


FIG. 21

# LOCALIZATION OF ch3G4 TO BLOOD VESSELS IN ORTHOTOPIC MDA-MB-435 TUMORS IN MICE

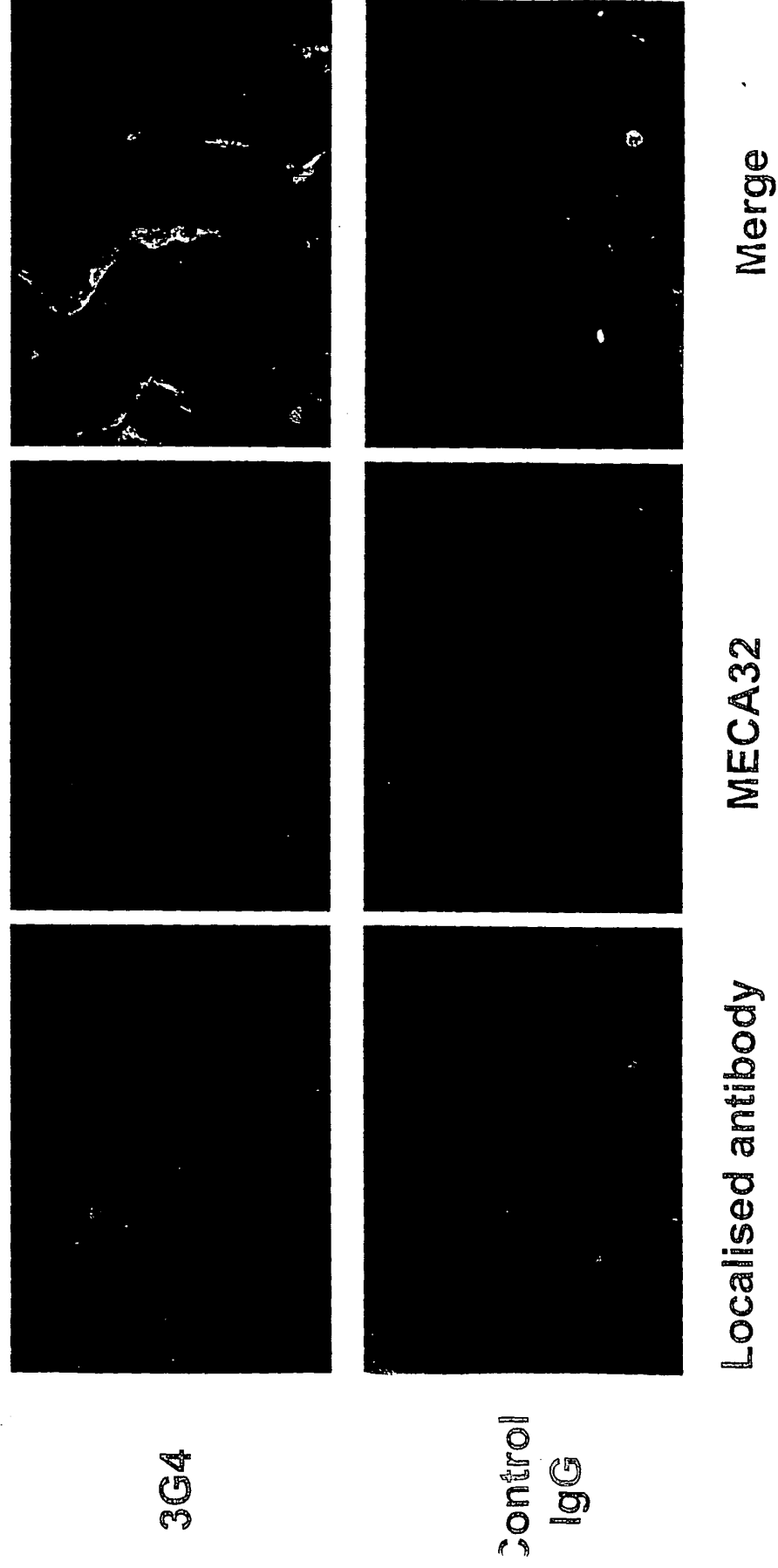


FIG. 22

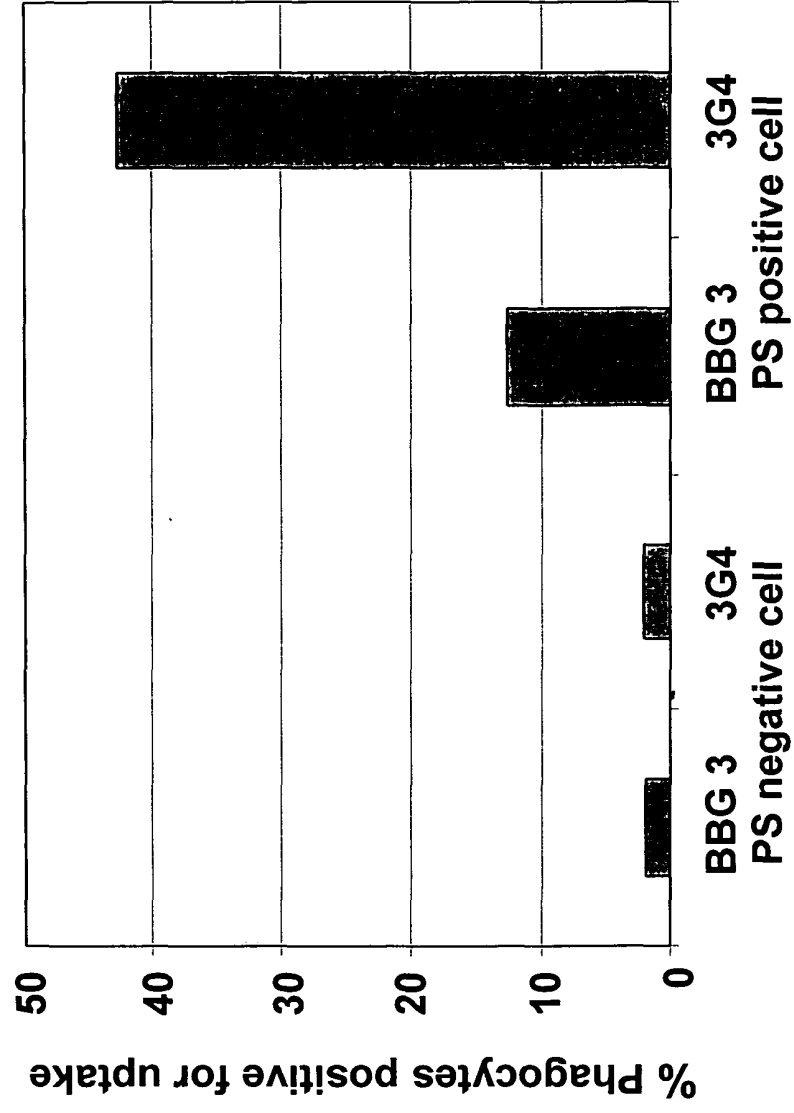


FIG. 23



# HUVEC

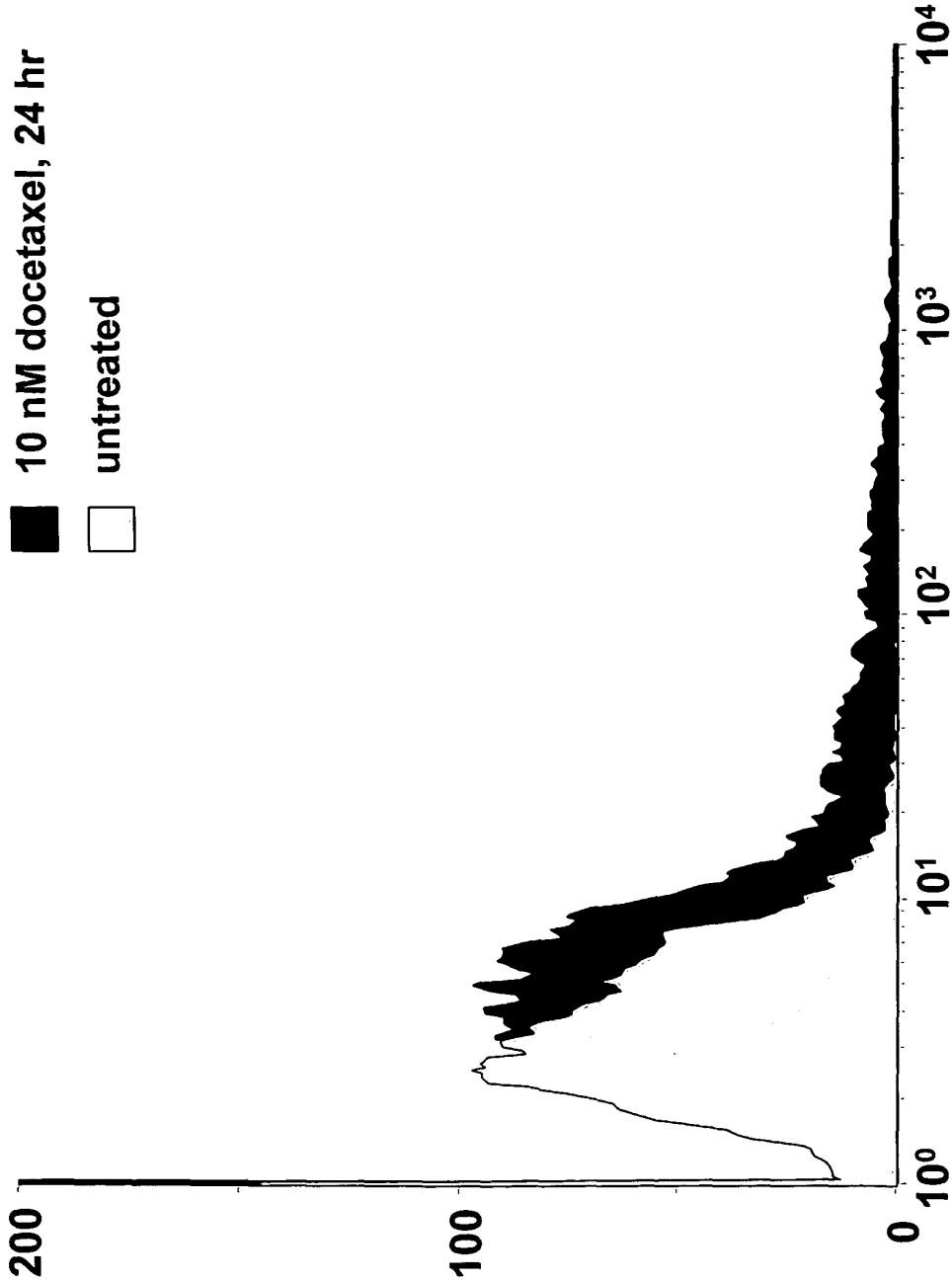


FIG. 24A

# HMVEC

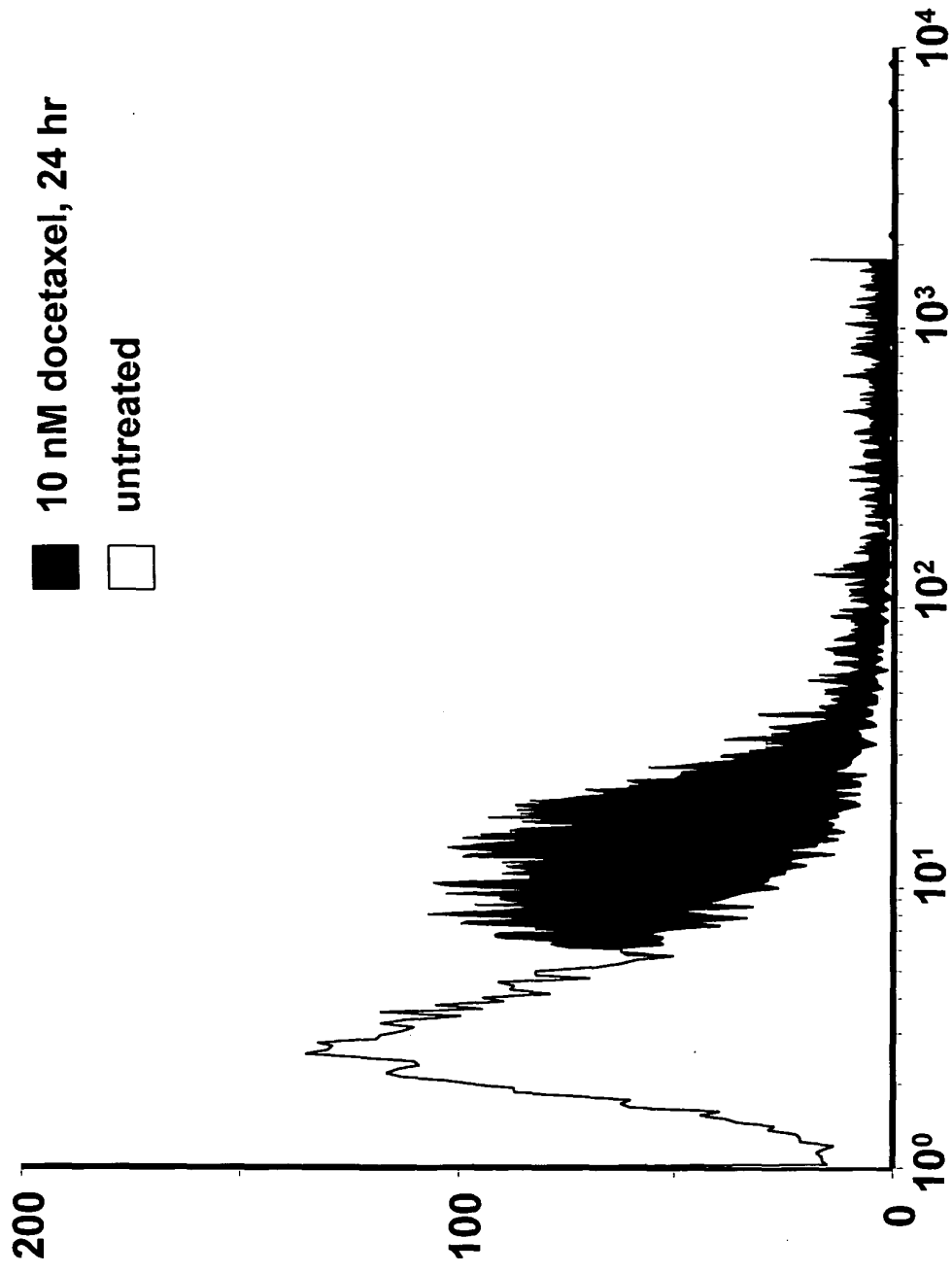


FIG. 24B

3LL

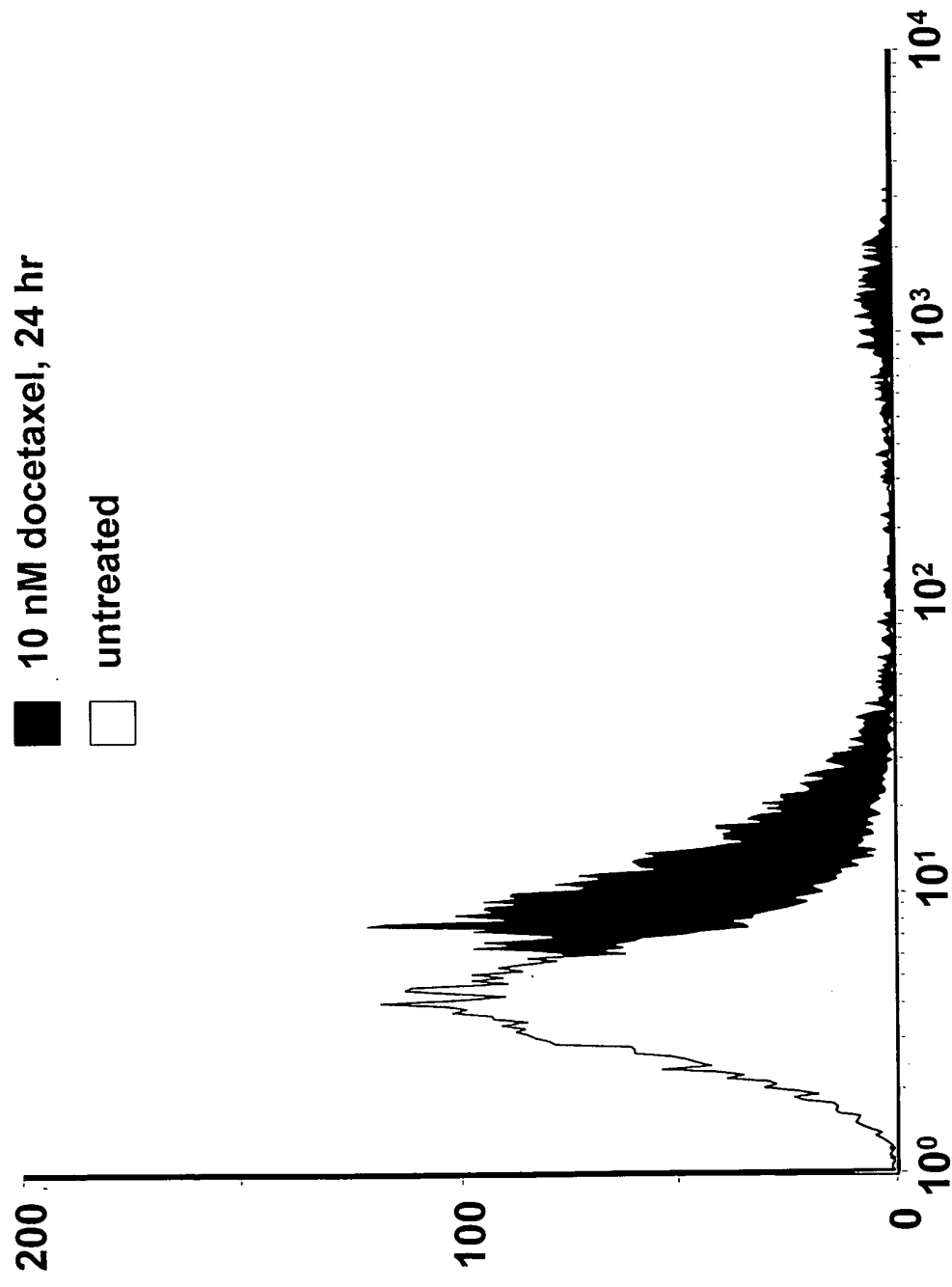


FIG. 25A

colo26

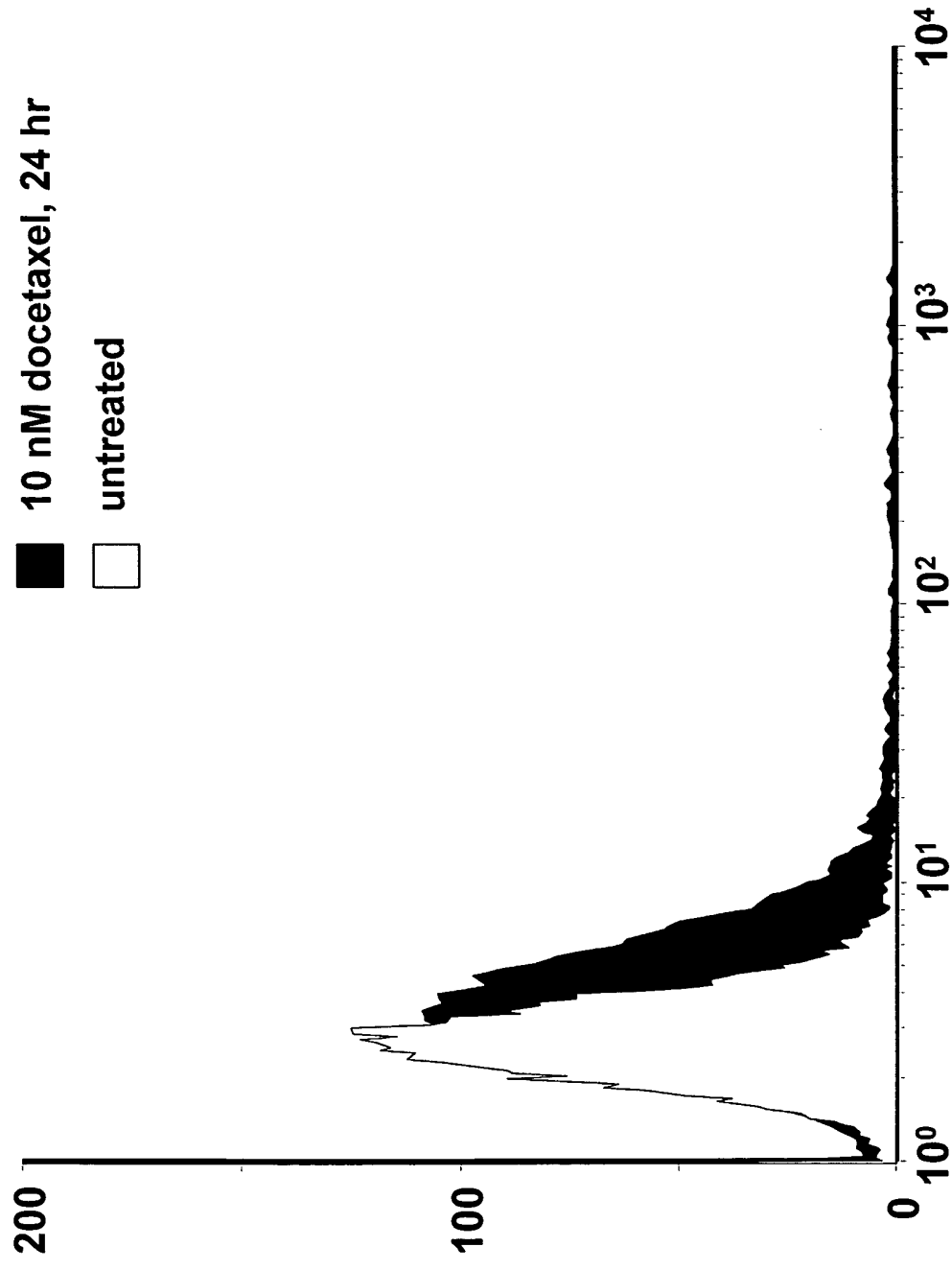


FIG. 25B

# 435s-luc

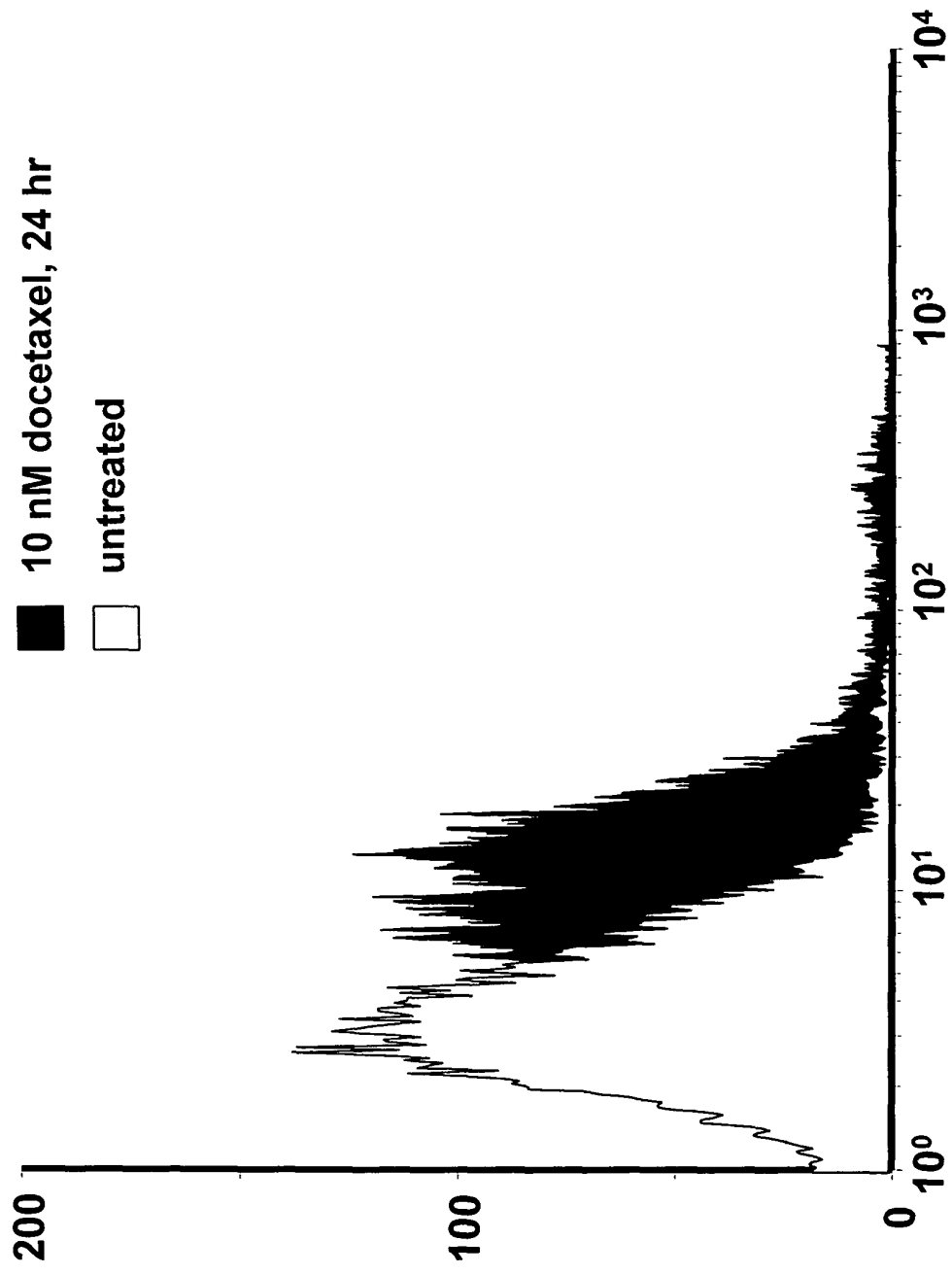
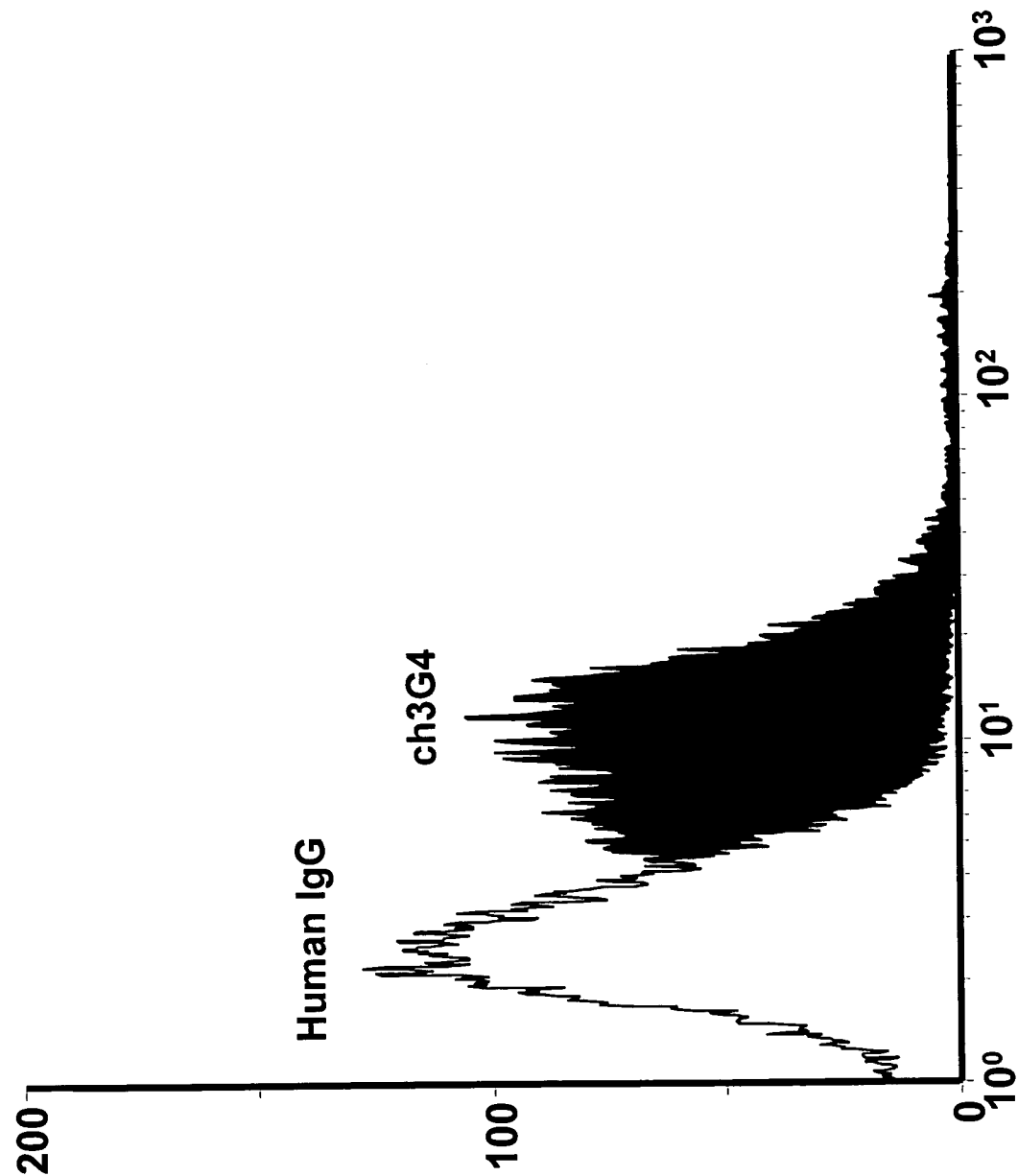


FIG. 25C

**Binding of 3G4 to MDA-MB-231 to by FACS**



**FIG. 26**

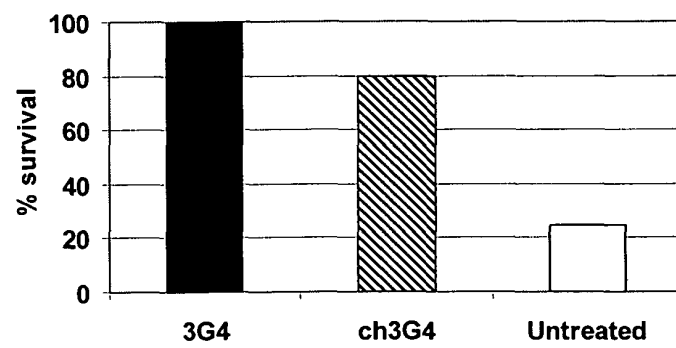


FIG. 27

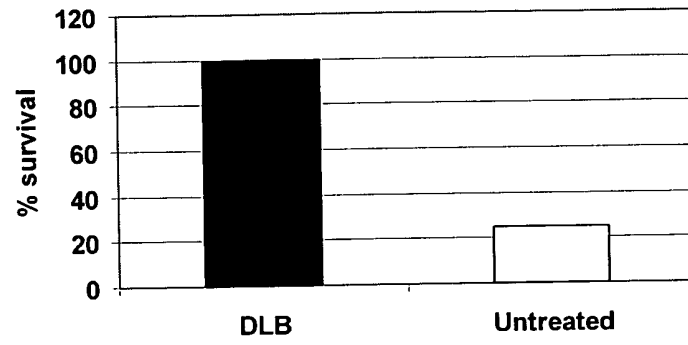


FIG. 28



FIG. 29A

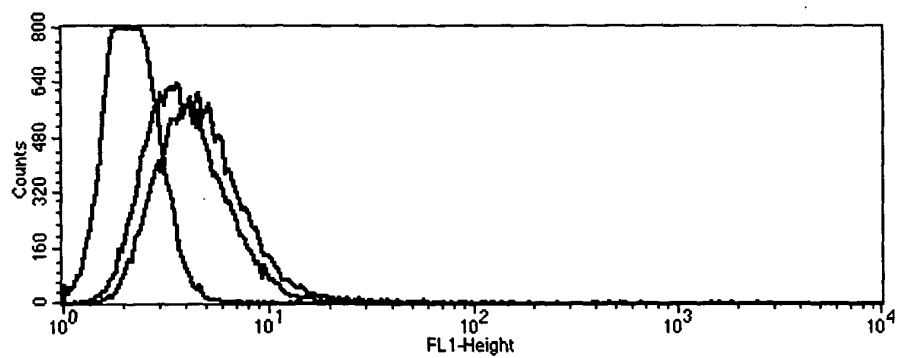
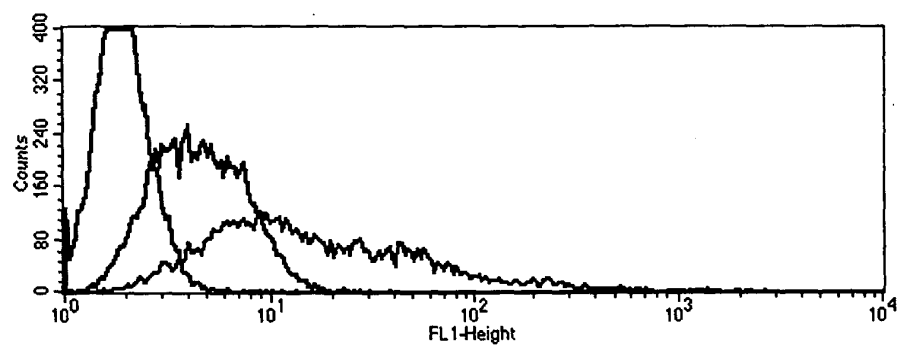


FIG. 29B



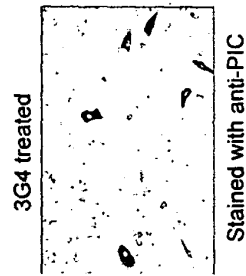


FIG. 30A

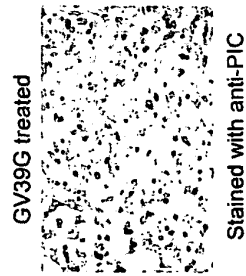


FIG. 30B

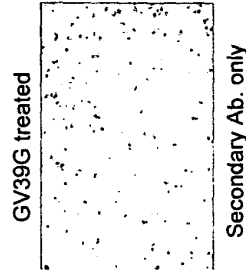


FIG. 30C

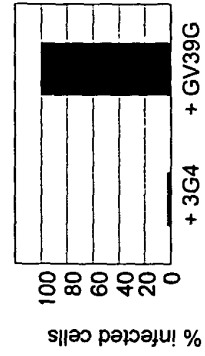


FIG. 30D

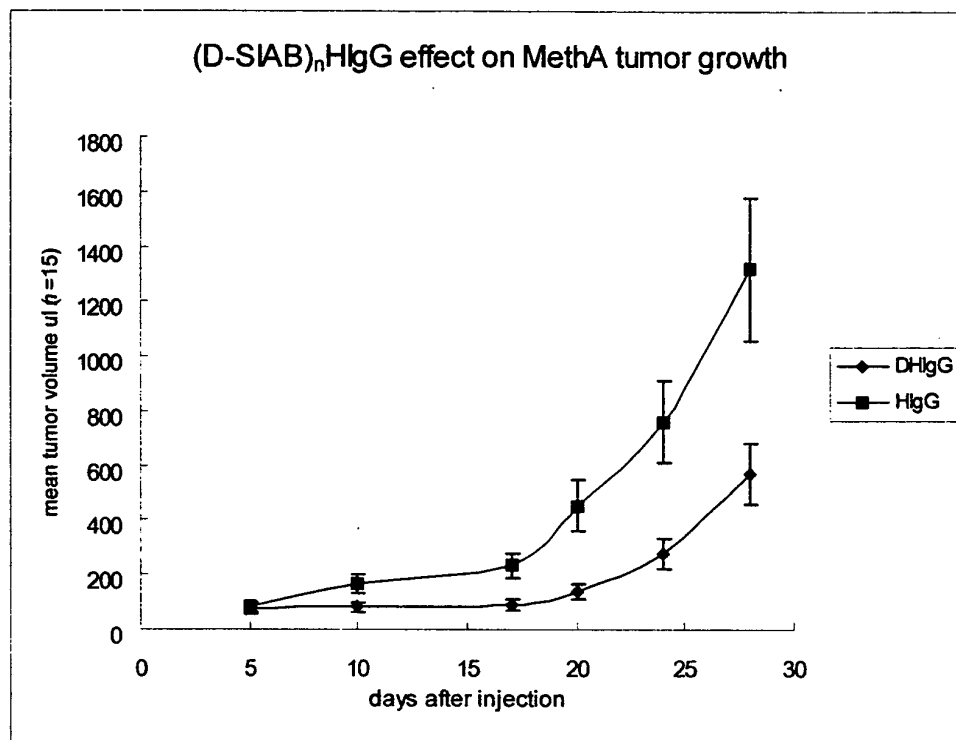


FIG. 31

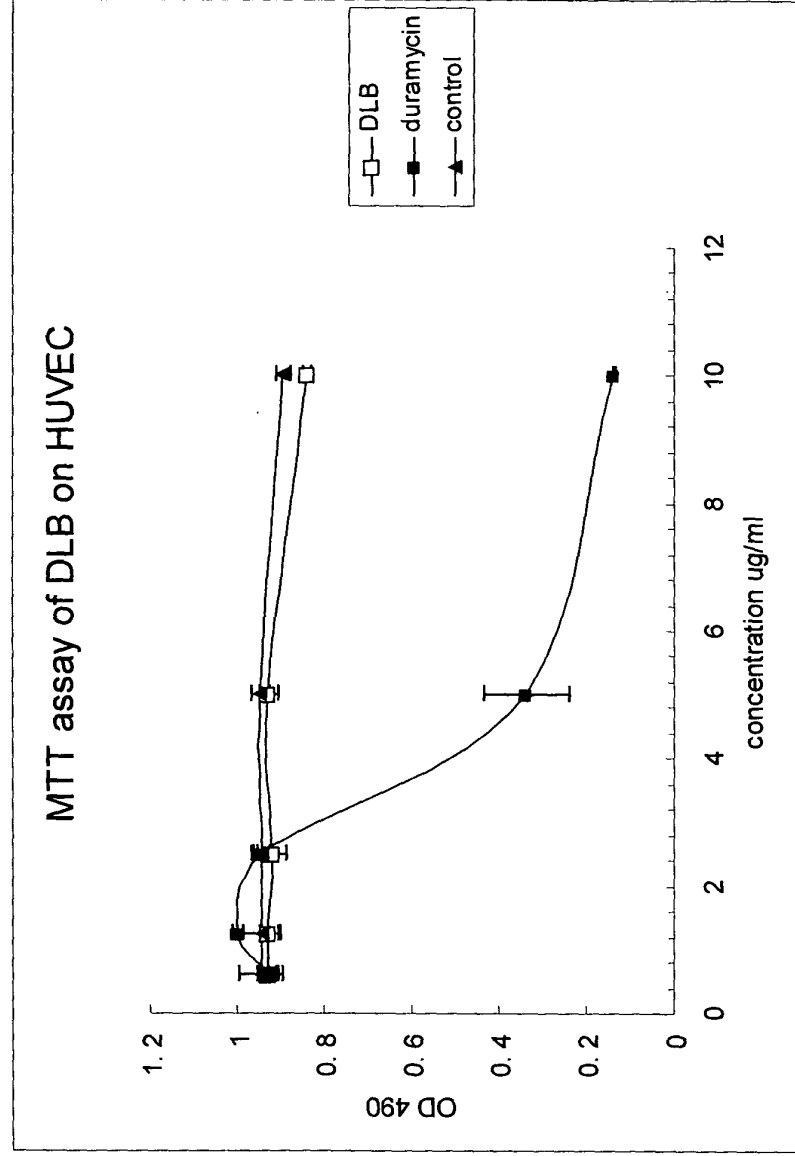


FIG. 32

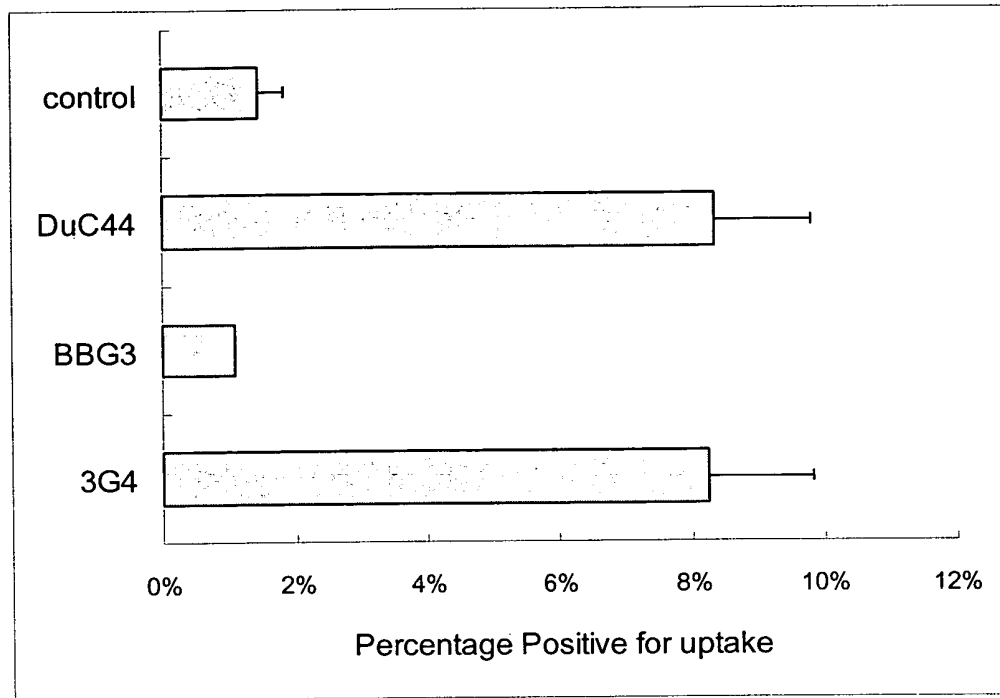


FIG. 33